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Science and Exploration for Curious Kids

Volume 22, Number 6 July/August 2023

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Ever eat anything bigger than your head?

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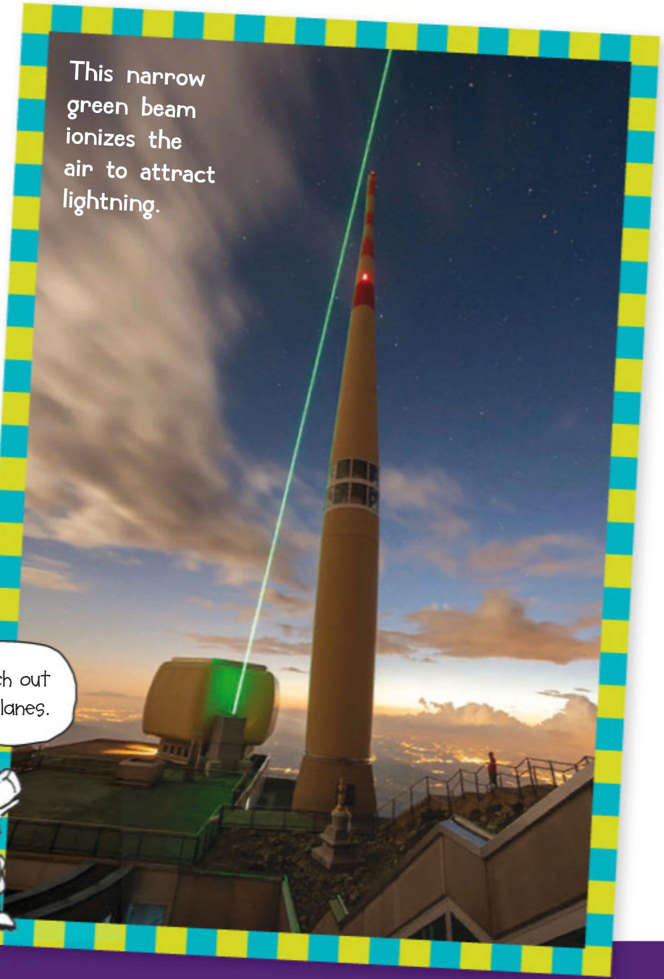
NOSY NEWS

by
Elizabeth
Preston

LIGHTNING VS. LASERS

In stormy weather, lightning can seriously hurt people, damage buildings, and start fires. A lightning rod is a tall metal pole that attracts lightning. If a lightning bolt hits the pole, it won't strike someplace else where it might hurt someone.

Now scientists have developed a new kind of lightning rod that can reach even higher. It's not metal at all, but a laser. Researchers put a powerful laser on top of a mountain in Switzerland. They pointed the laser beam high into the sky, much higher than a metal pole could reach. The laser makes a thin column of ionized air that draws lightning bolts in a storm. This could help protect rockets and weather stations in high places.



This narrow green beam ionizes the air to attract lightning.

Watch out for planes.

Keeping Cool with Snot

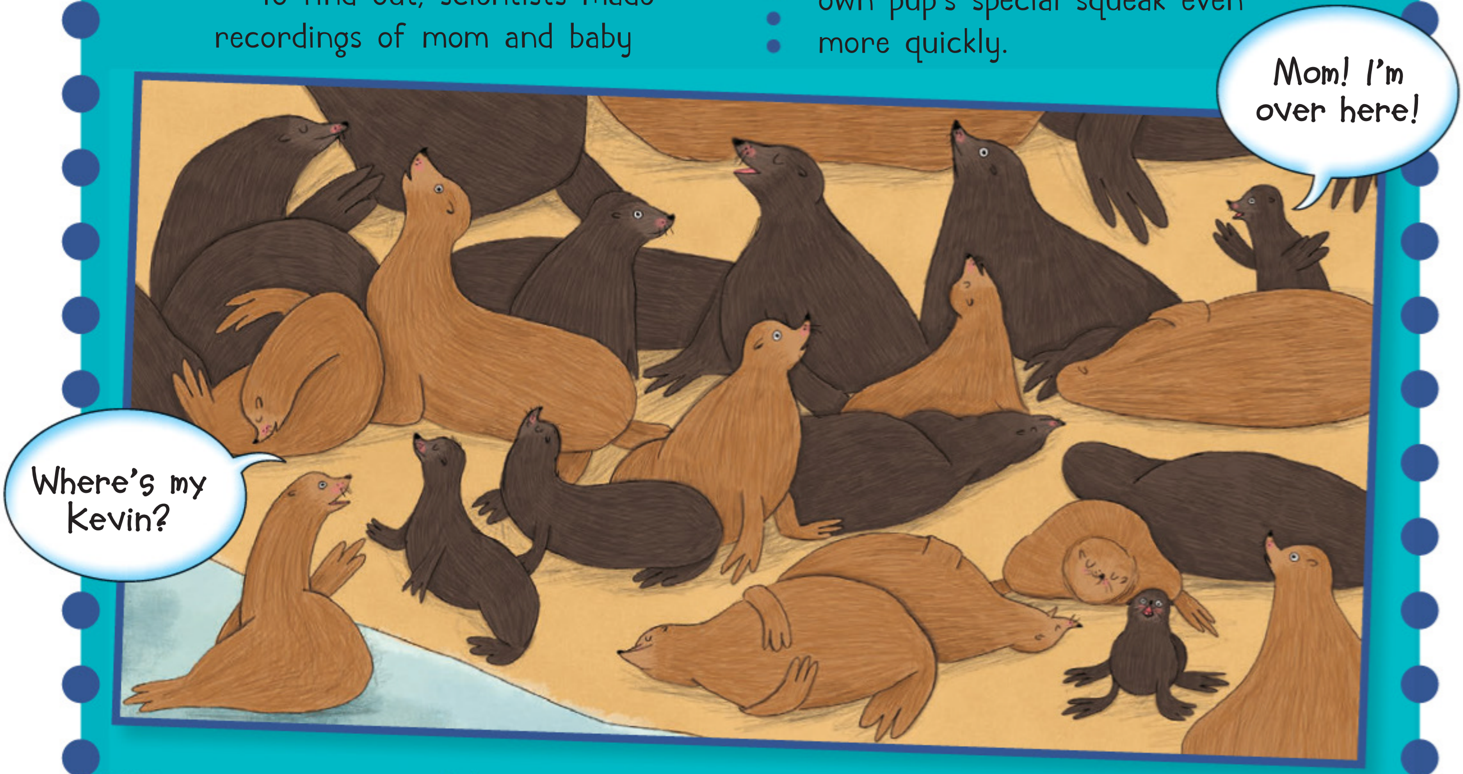
Putting boogers on yourself probably won't make other kids think you're cool. But for spiny animals called echidnas, snot is a great way to keep cool on a hot day.

The echidna lives in Australia and nearby countries. It's a mammal that can lay eggs, like a platypus. It can also use its long, pointed snout to sniff out bugs to eat. One thing the echidna can't do, though, is sweat. Sweating helps people and other animals stay cool when it's hot outside. Echidnas live in toasty places—so why don't they overheat?

Are You My Mother?

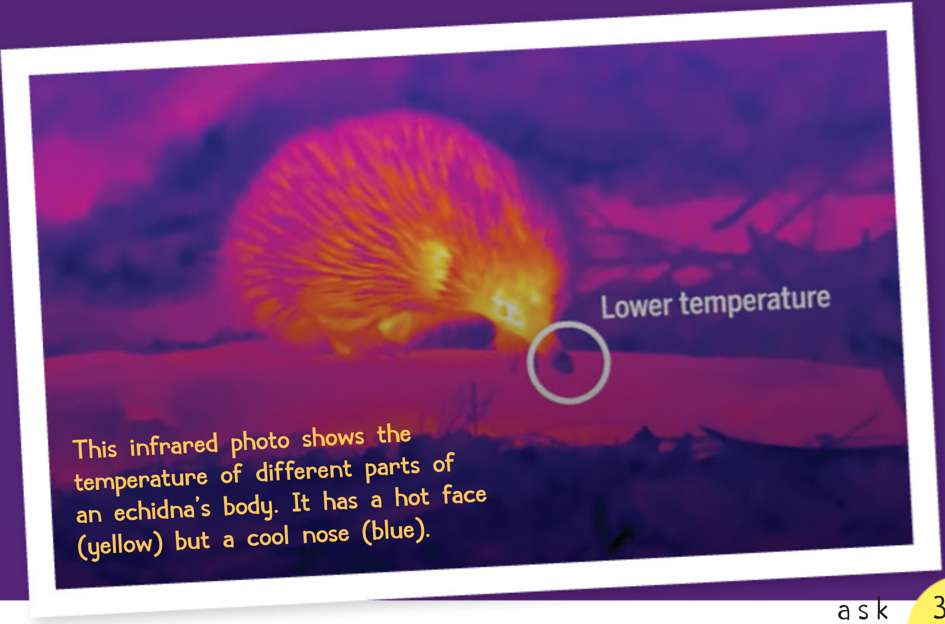
Animals called Cape fur seals live in huge groups, with hundreds of thousands of moms and babies in one place. This cuddly seal pile is pretty cute. But when moms leave their pups to catch fish, how do they find each other again?

To find out, scientists made recordings of mom and baby seals. Then they played these recordings to the animals and watched how they reacted. They saw that pups recognized their moms' voices just 4 to 6 hours after they were born. And a mom seal could recognize her own pup's special squeak even more quickly.


Mom! I'm over here!
Where's my Kevin?

I think I'll stick with iced tea.

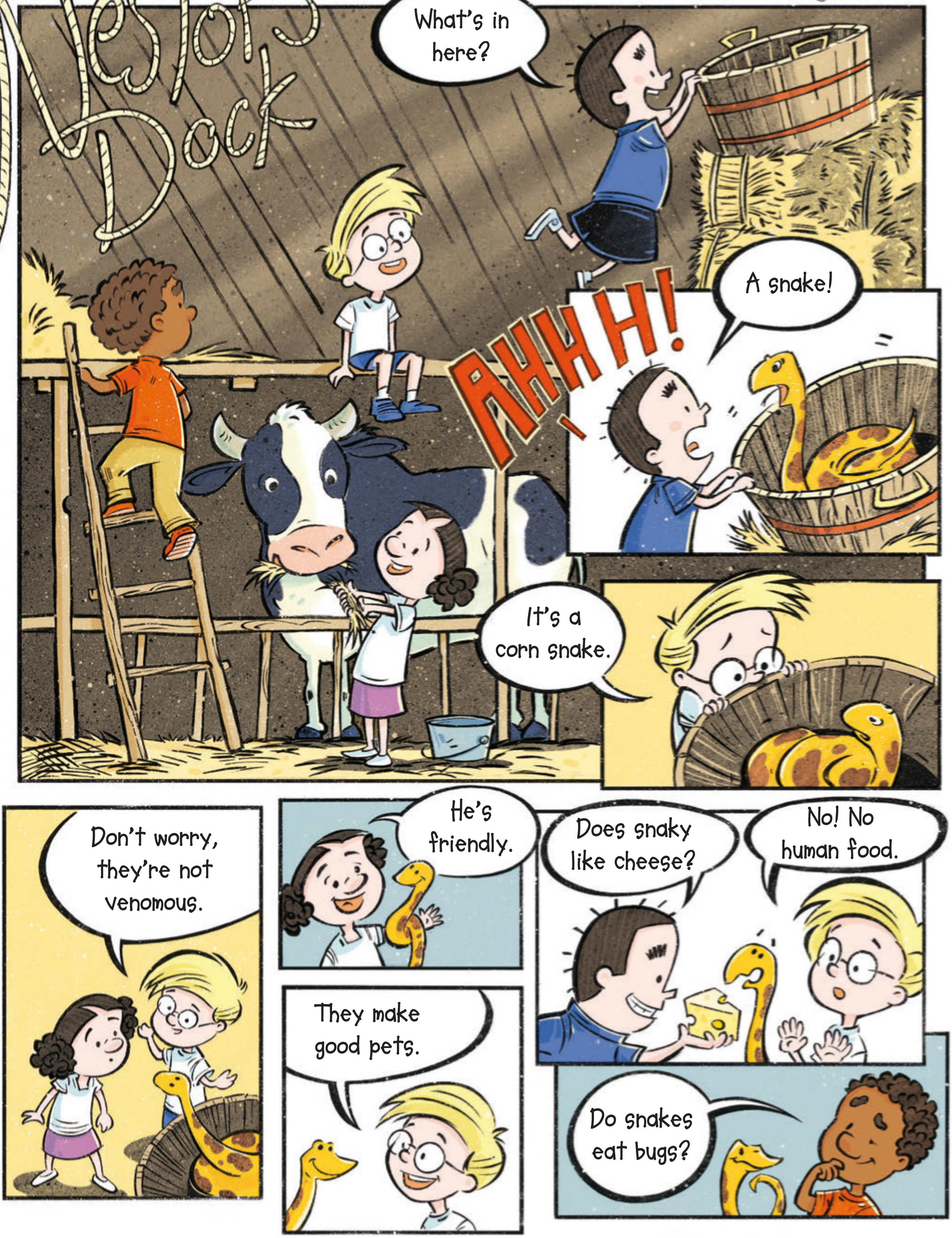
Scientists found that when it's hot out, echidnas blow snot bubbles from the tips of their noses. Like drying sweat, a damp snout seems to help the animals keep cool.

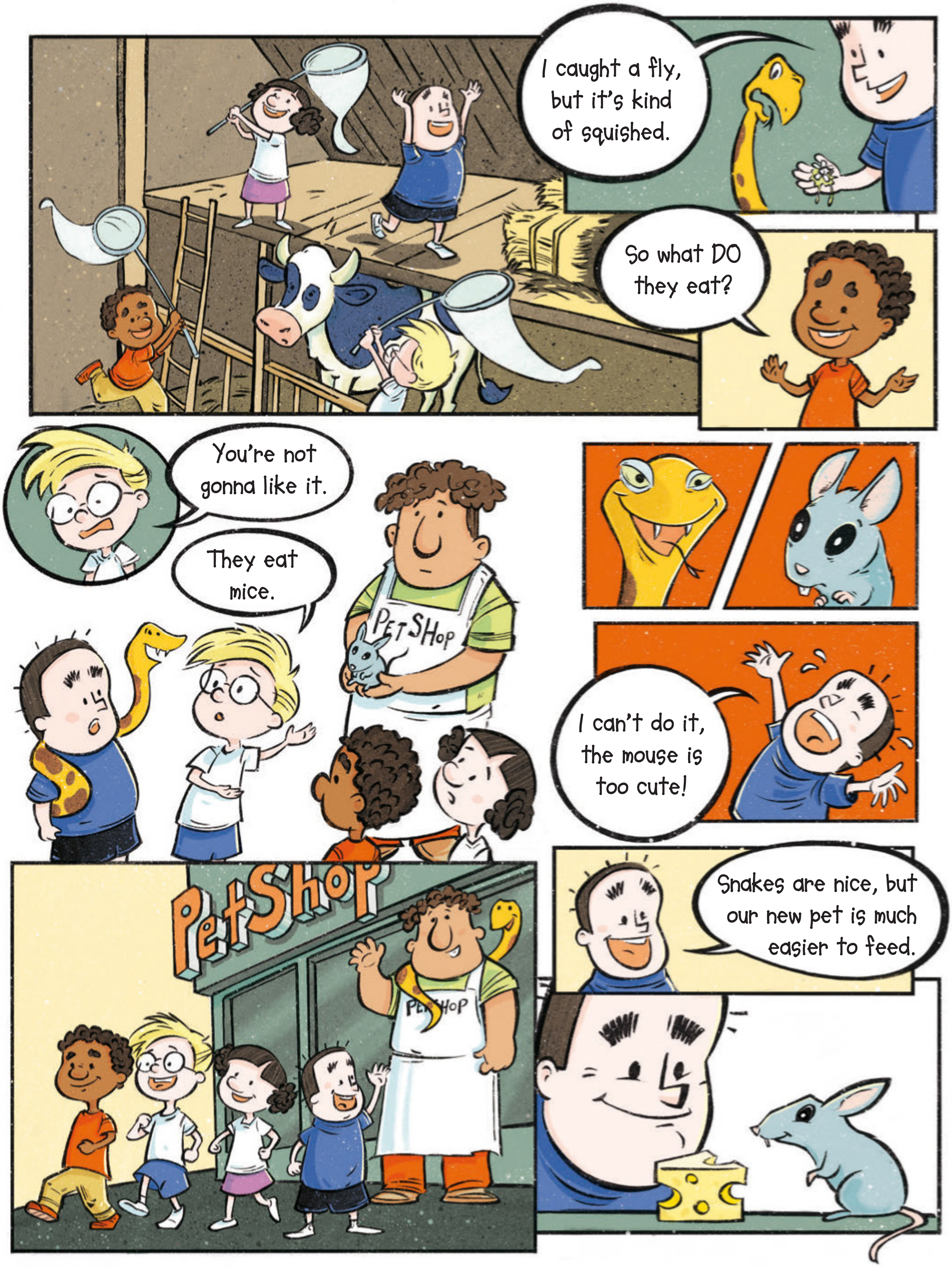


This infrared photo shows the temperature of different parts of an echidna's body. It has a hot face (yellow) but a cool nose (blue).

Nestor's Dock

by Jeffrey Ebbeler


What's in here?
AHHH!
A snake!
It's a corn snake.
Don't worry, they're not venomous.
He's friendly.
They make good pets.
Does snaky like cheese?
No! No human food.
Do snakes eat bugs?


I caught a fly, but it's kind of squished.
So what DO they eat?
You're not gonna like it.
They eat mice.
PET SHOP
I can't do it, the mouse is too cute!
PetShop
PET SHOP
Snakes are nice, but our new pet is much easier to feed.

At the ANIMAL

How do you know you don't like it if you won't try it?

For a mouse wandering around the forest floor, dinner might be seeds, or mushrooms, or berries, or beetles—whatever it can find. Eating a mix of food is a good strategy for a mouse. It makes it easier to get all the protein and energy and vitamins the animal needs.

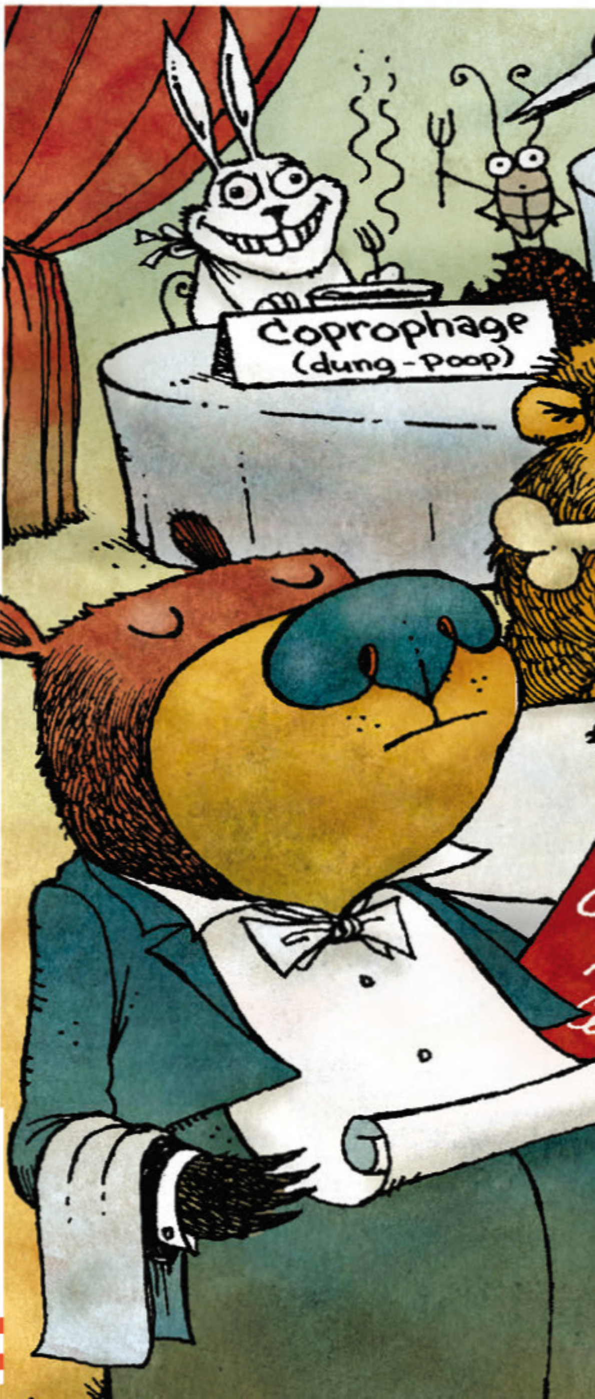
And if a mouse is willing to eat different things, it's less likely to go hungry. No berries today? Try a nice root! Still, there are some things a mouse won't eat. Wood, crocodiles, and poisonous mushrooms are never on a mouse's menu.

Most animals, like the mouse, eat different things but mostly stick to their favorite foods, suited to their needs and where they live.

But there are some picky eaters in the animal kingdom—and some extra adventurous eaters too. So how do animals choose what to have for lunch?

Mice are foragers—they wander around and eat what they find. Berries are a favorite.

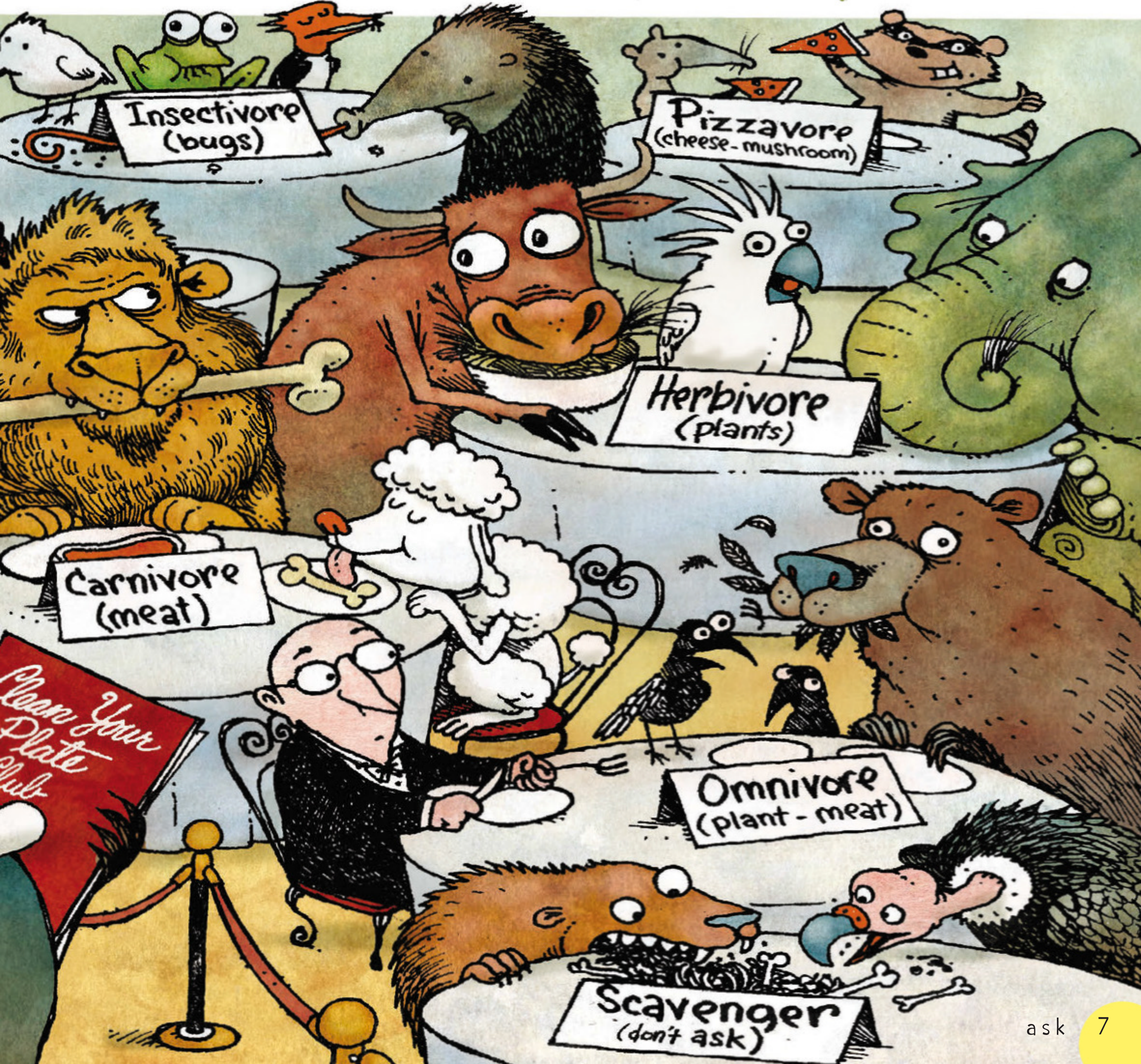
If it's on the ground, it must be good!


Coprophage
(dung-Poop)

Clean-Plate CLUB

Do you have a favorite food? Turn your nose up at anything new? You're not alone.

by Alison Pearce Stevens,
art by Dave Clark


Insectivore
(bugs)
Pizzavore
(cheese-mushroom)
Herbivore
(plants)
Carnivore
(meat)
Clean Your Plate Club
Omnivore
(plant-meat)
Scavenger
(don't ask)

Daily Specials

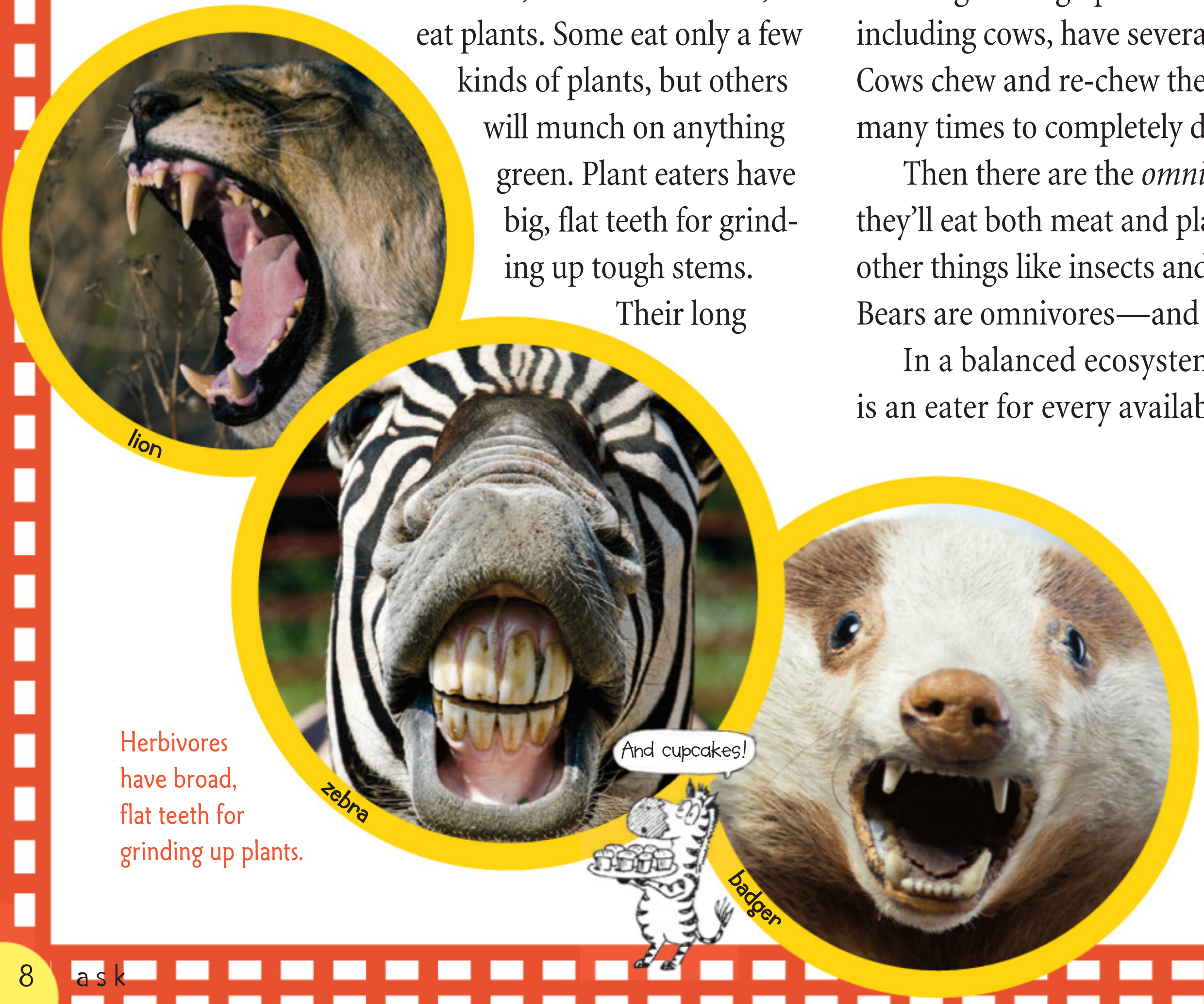
Many animals specialize a bit—they prefer to eat mostly meat, or mostly plants, or mostly insects.

Animals that eat meat are called *carnivores*. But as long as it's meat, they will eat just about anything they can catch with their sharp claws and teeth. Meat is easy to digest, so carnivores have simple digestive systems. Of course, catching a meal can be hard work—no animal wants to become another one's lunch. So meat eaters have to be fast and strong, and they often go hungry.

Herbivores, on the other hand, eat plants. Some eat only a few kinds of plants, but others will munch on anything green. Plant eaters have big, flat teeth for grinding up tough stems. Their long guts are full of special bacteria to help them digest rough plant fibers. Some, including cows, have several stomachs. Cows chew and re-chew their grass many times to completely digest it.

Then there are the *omnivores*—they'll eat both meat and plants, and other things like insects and honey. Bears are omnivores—and so are we.

In a balanced ecosystem, there is an eater for every available kind



Carnivores' sharp, pointy teeth are good for catching and slicing meat.

Herbivores have broad, flat teeth for grinding up plants.

Omnivores have a mix of different kinds of teeth.

of food. Sometimes, what an animal eats depends on who else is living in the same area. Small South American hoary foxes share a forest with larger maned wolves and crab-eating foxes. The big wolves and foxes hunt for crabs and mice. The smaller foxes can't compete, so they have learned to eat termites and fruit instead. This lets them share the forest with their larger cousins.

Bears eat berries in the spring, fish when the salmon run, nuts in the fall, and nothing all winter, when they're hibernating.

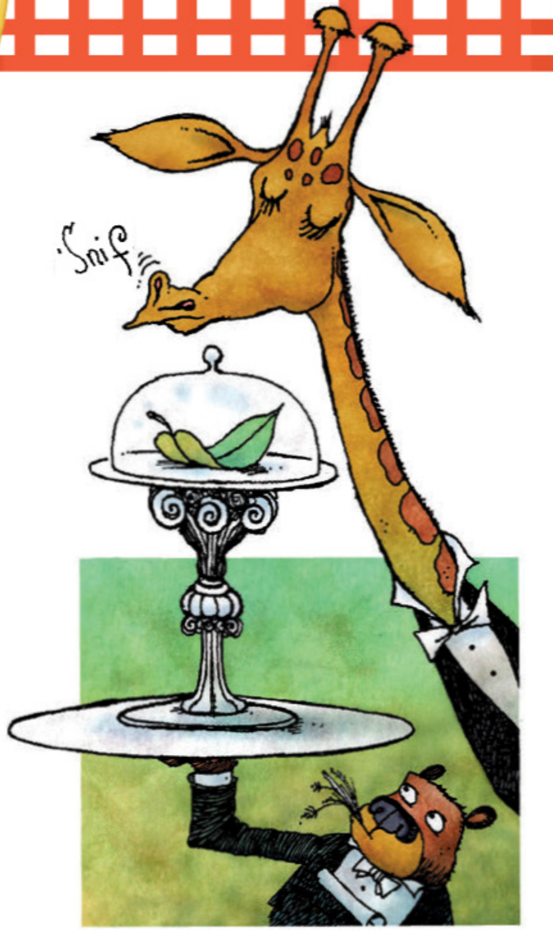
I found this delicious nut just lying on the ground!

I'll trade you that enormous nut for 10 of mine!

Chipmunks do love nuts, but they also eat fruit, mushrooms, bird eggs, and tree buds.

I'm not picky, I'm discerning.

What Picky Eaters Pick



A few animals, like some people, are picky eaters. They just like to eat one thing.

Take the koala, a cuddly Australian animal related to kangaroos. Koalas live in eucalyptus trees, and all they eat for breakfast, lunch, and dinner are eucalyptus leaves.

Eucalyptus leaves are not very nutritious. They are also full of a strong oil that smells like cough drops. But koalas don't mind. They have evolved an ability to digest the eucalyptus oil, so they don't get stomach aches. And since other animals avoid eucalyptus, the koalas have it all to themselves. They don't need to be fierce or fast to get a meal. That's a good thing—the leaves don't have much energy, so neither do the koalas. They spend 18 hours a day sleeping and digesting.

Koalas are not bears—they're marsupials, like kangaroos, with pouches to carry their young.

And for dessert... eucalyptus!

We usually think of picky eaters as demanding only the best or most tasty food. But among animals, the picky eaters often eat what other animals don't want. That means they can have all that food for themselves.

If you eat the same food all the time, you can be pretty sure it's safe and won't make you sick. Animals that eat just one thing can develop

Hmm...tastes like cough drops.

mouths and claws shaped to get that food very efficiently. But if you only eat eucalyptus, you need a lot of it! Picky eaters often require lots of space to graze in.

Being too picky also has risks. If a tree disease or insects wiped out the eucalyptus trees, the koalas might go hungry.

Beautiful monarch butterflies are picky eaters too. Monarch caterpillars feed only on milkweed, which is full of poisonous white sap. But the poison doesn't hurt the caterpillars—it protects them. Birds quickly learn to leave the bad-tasting black-and-yellow caterpillars alone.

Because milkweed protects their caterpillars, monarchs only lay eggs on milkweed plants. And that can be a problem—as milkweed gets harder to find, fewer young monarchs are born.

Picky eaters will often go to great lengths to get their favorite food. Clark's nutcrackers are birds that are nuts for pine nuts. If they collect more nuts than they can eat, they hide some for later. Nutcrackers can remember their hiding places for up to nine months, so they can munch on their favorite nuts all year round.

But even the most picky animals usually eat other foods once in awhile. Some nutcrackers will nibble insects or even toads if they find them.

The long, sharp beak of a Clark's nutcracker is just the right shape for digging out pine nuts.

Mmmmilkweed!

Monarch caterpillars munch milkweed.

Wouldn't you rather have a nice mango?

I Love Leftovers

Vultures are picky eaters in a strange way: they don't care what they eat, as long as it's been dead awhile. Vultures are scavengers, animals that like to eat what other animals leave behind. They play an important role in cleaning up nature's messes. Vultures are well adapted to their decaying diet. Ever smelled a dead animal? It stinks! Those smelly gases guide vultures right to the carcass. A curved beak helps them tear in to get at the meat inside, and a bald head helps them keep clean. Rotten meat is crawling with germs that would make most animals sick. But a vulture's stomach is full of super-strong acids that kill nasty germs. And their intestines host microbes that knock out any germs that survive the acid.

Bring It On!

Every meal should be an adventure!

Some animals are the opposite of picky. They're willing to try just about anything that looks like it might be edible. Of course, many other animals are competing for the same food. But if you're willing to eat anything, you can always find a meal.

Adventurous eaters can be carnivores, herbivores, or omnivores. Some, like the monkfish, aren't very adventurous in other ways. The odd-looking monkfish lies on the ocean floor, waving around a long, fat quill that looks like a worm. When a fish, squid, or other critter swims up to take a nibble, the monkfish opens its enormous jaws and sucks the visitor down—whatever it happens to be.

Come just a little closer....

Monkfish lure their dinners in by pretending to be dinner themselves.

The praying mantis is an insect ambush hunter. Perching on a flower, the mantis looks like part of the plant. Large eyes track flies, bees, and wasps that come to sip nectar. When it spots movement, it darts out lightning-fast legs covered with spikes. Hungry mantids are not choosy—they have

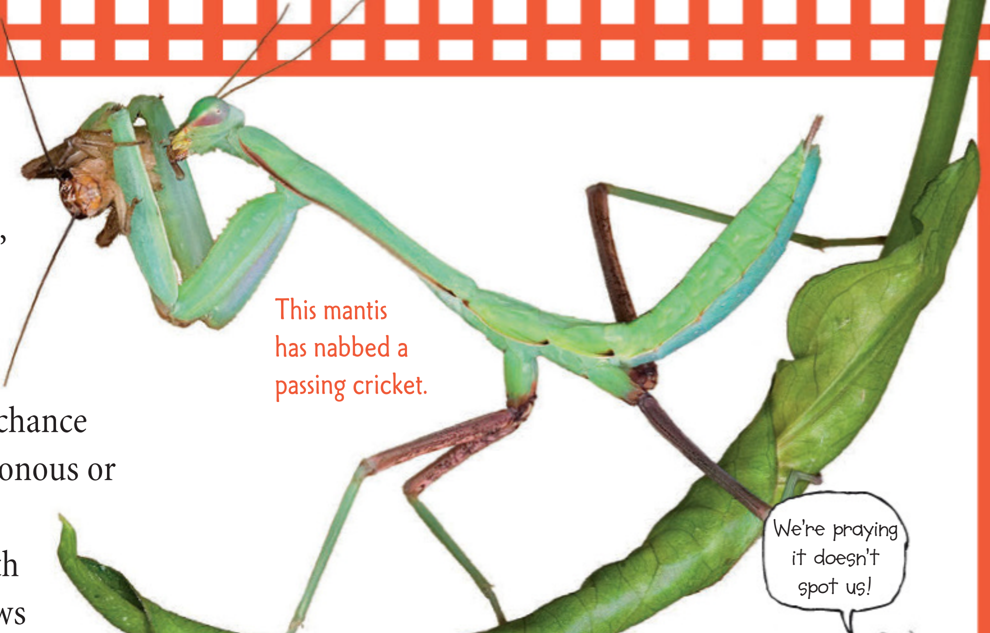
Try It, You'll Like It!

Just like humans, within any species, some individuals are more picky than others. Clark's nutcrackers mostly eat pine nuts, but some are happy to try a bug or frog. Others are more cautious and stick to nuts. Even among raccoons, some are more choosy about their trash. This range of eating styles is good for a species. Picky eaters are less likely to eat something dangerous, keeping the species safe. But their adventurous brothers and sisters just might discover something delicious that everyone can share.

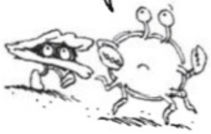
been known to catch and eat small lizards and even hummingbirds. Sometimes, they even eat each other.

The "try anything" approach to eating can be risky—there's always a chance that your meal may be poisonous or fight back. So adventurous eaters need to be tough, with mouths, stomachs, and claws that can handle a wide variety of food. And their gut bacteria need to be strong.

But adventurous eating has many advantages. For one thing, it means you can live in a lot of different places—including cities! Some of the most successful city animals, such as rats, pigeons, and raccoons, are naturally curious and daring eaters. This has made it easy for them to move into cities, where they soon learn to like people food and trash.



This mantis has nabbed a passing cricket.


We're praying it doesn't spot us!

Please Don't Eat the Daisies

Adventurous eaters can sometimes be a big problem. American bullfrogs, for example, will eat any critter they can fit into their mouths. Snails, insects, crayfish, spiders, leeches, tadpoles, and smaller frogs are all on the bullfrogs' menu. And that's not all! They will also eat mice, birds, bats, and small turtles. In fact, bullfrogs have been known to eat 82 different kinds of animals. Although such a varied diet helps the bullfrog survive (unless, of course, it is eaten by another bullfrog), it's bad news for other creatures when the bullfrogs move in.

For every animal in every place, there's a different best way to eat. For some, it's better to corner the market on one favorite food. For others, it pays to eat what no one else wants, or to eat anything and everything. There are plant lovers and meat lovers and those that like both. But they all agree, the best time of day is—lunchtime!

African bullfrogs are also eager eaters.

Sorry, I couldn't resist.

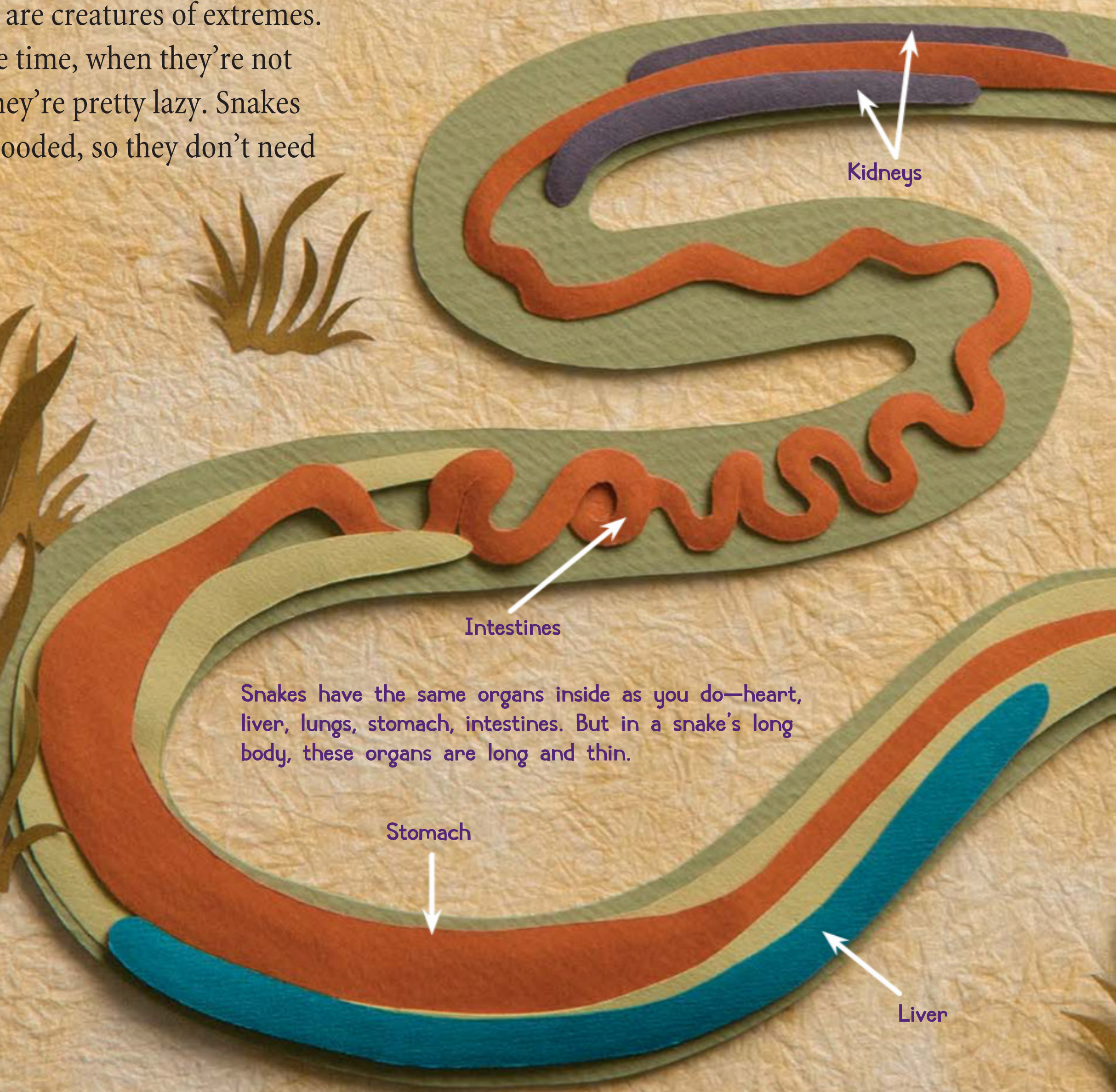
The best time of day is dessert!

HOW to SWALLOW

For extreme eating, snakes may take the prize.

You know that feeling you get when you've eaten a huge meal and need to lie down for a bit? Now imagine how you would feel if that meal weighed as much as you do (or more!) There's no way you could eat something that big, but pythons regularly do.

Snakes are creatures of extremes. Most of the time, when they're not hunting, they're pretty lazy. Snakes are cold-blooded, so they don't need to use energy to heat their bodies. A snake resting in the warm sun can slow down its breathing and heartbeat so it uses almost no energy at all. That means that snakes don't need to eat very often—a large snake like a python may eat only a few times a



Snakes have the same organs inside as you do—heart, liver, lungs, stomach, intestines. But in a snake's long body, these organs are long and thin.

Yeah, crocodiles are much tastier than rats!

a CROCODILE

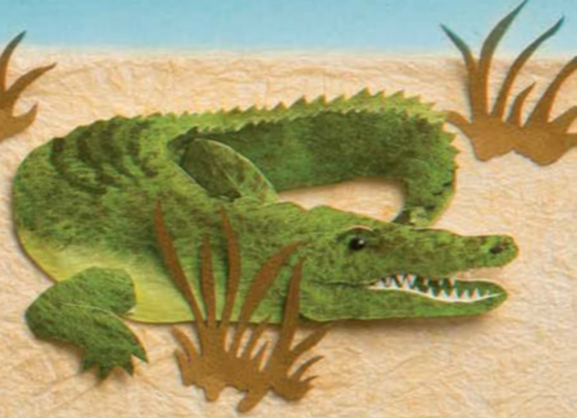
by Nicole Gill
art by Denise Ortakales

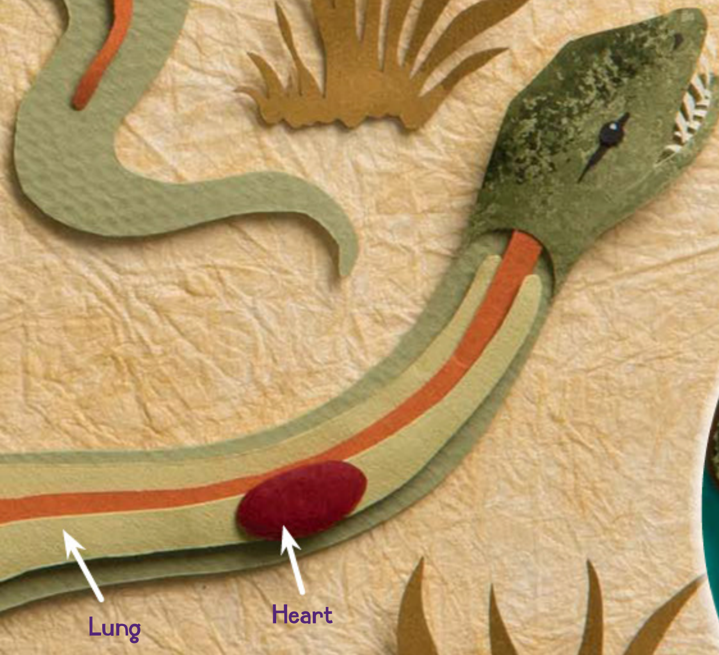
We must be going now!

year. One big meal gives it enough energy to last many months.

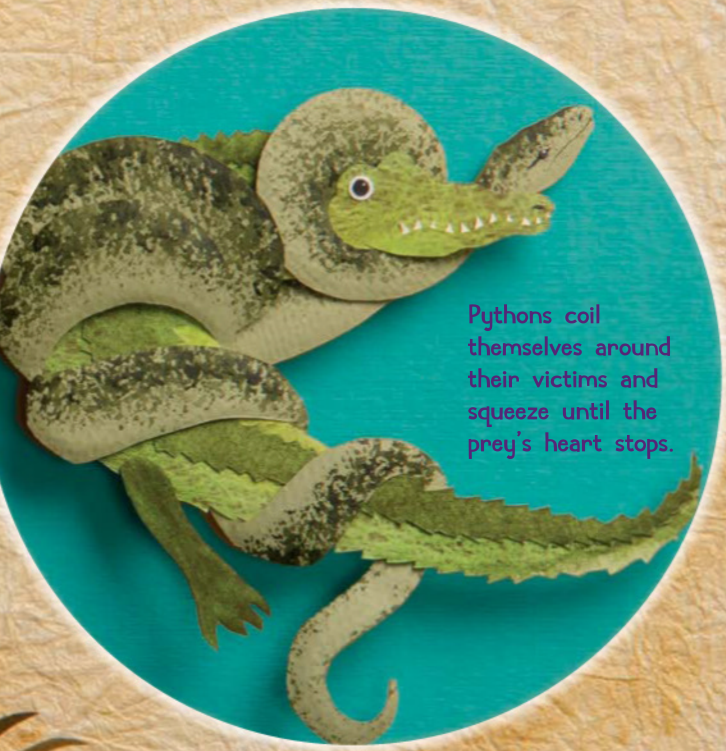
This trick helps snakes survive in places where food is scarce. And it keeps them safe—the less often they have to go out to hunt, the less risk they run of being eaten themselves. But when it's time for a meal, snakes rev themselves up, putting on a burst of speed to catch unwary creatures.

After a python catches and kills its prey—maybe a careless crocodile—comes the first eating challenge: how to swallow it?





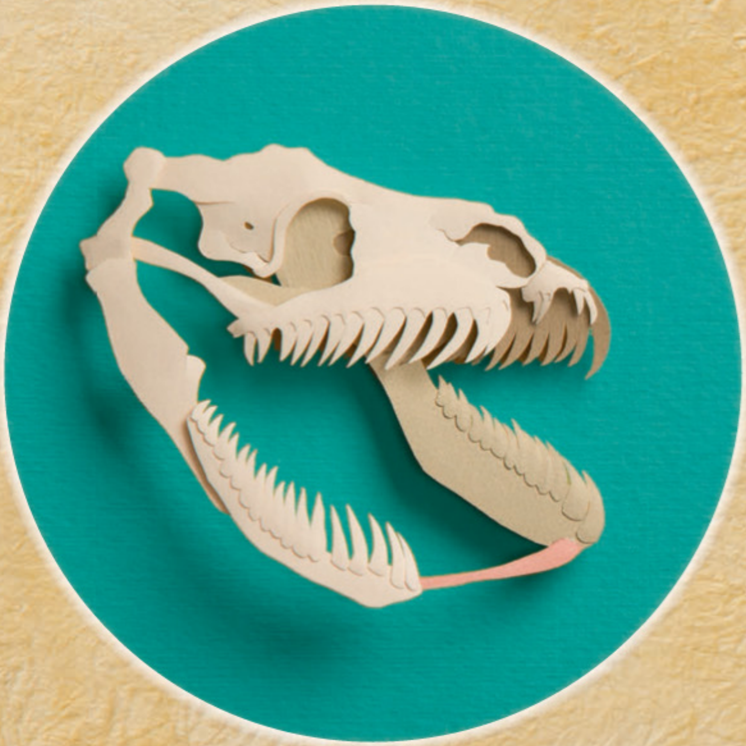
A python's sharp teeth angle backward to help move food into the stomach.



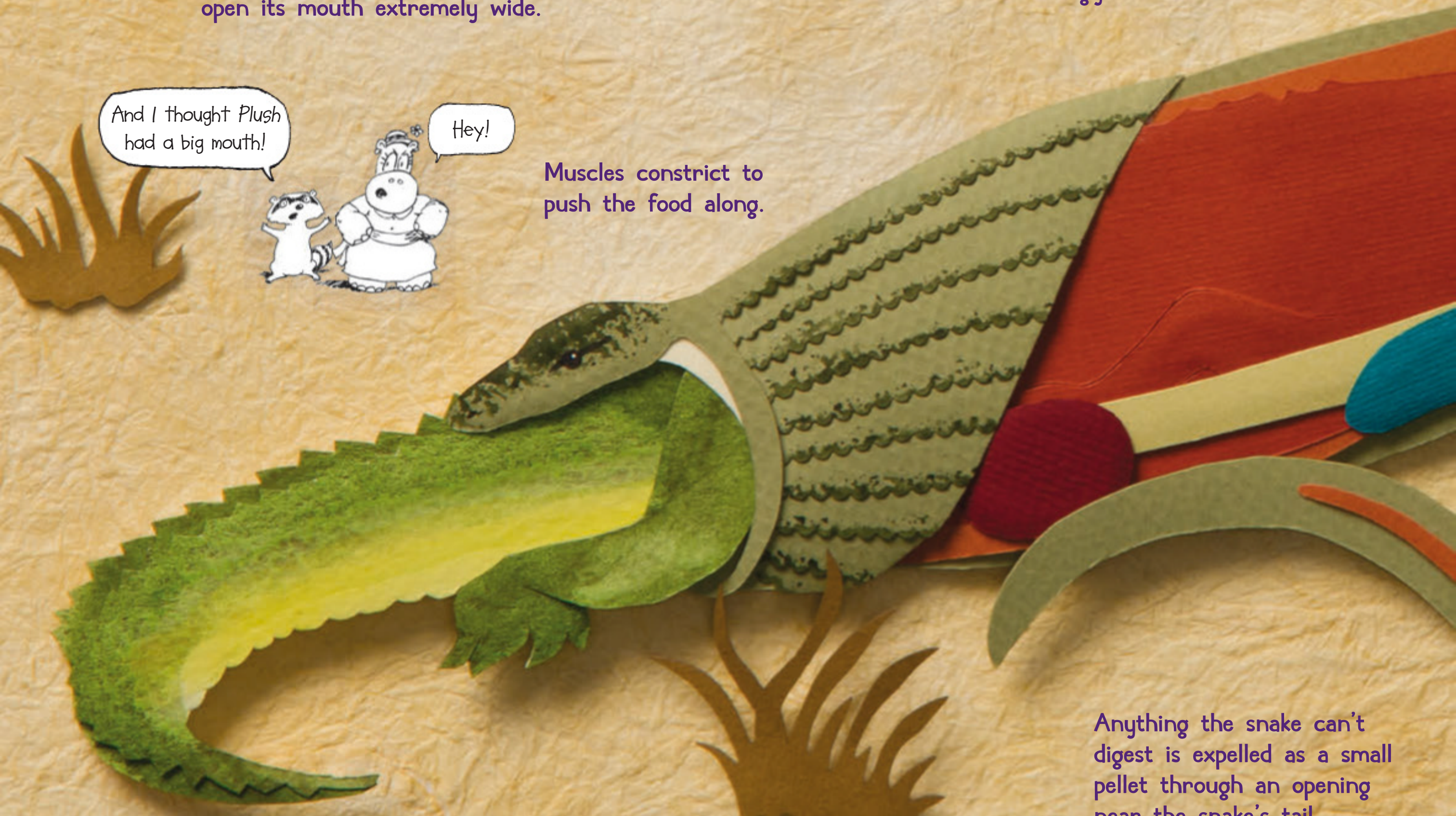
Pythons coil themselves around their victims and squeeze until the prey's heart stops.

Pythons are big snakes. Some can reach 30 feet (10 m) long and weigh 200 pounds (90 kg). But with no hands and small teeth, they can't tear apart their food. Instead, they stretch their jaws wide and slowly swallow their dinners whole.

Powerful muscles move the meal along. And inside, the python's whole body changes. Breaking down a crocodile is hard work! The heart and liver nearly double in size. Body-building cells multiply like crazy. The stomach and pancreas pour out digestive juices.



Snakes have evolved flexible jaws to swallow large prey. A python's lower jaw is connected by a stretchy tendon at the bottom. This allows the python to open its mouth extremely wide.


And I thought Plush had a big mouth!
Hey!

Inside the snake, powerful stomach acids break down the meal to store as fat in the snake's body. The snake will use this energy for months to come.

Muscles constrict to push the food along.

Anything the snake can't digest is expelled as a small pellet through an opening near the snake's tail.

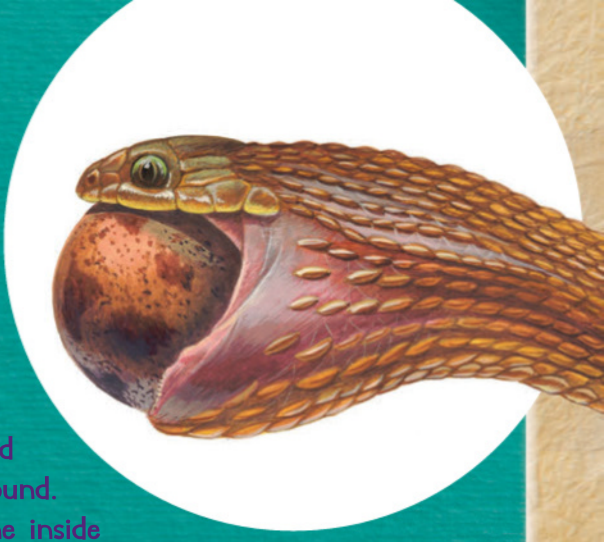
In fact, a python digesting can burn 20 to 45 times more energy than when it's resting. That's like the difference between a sleeping horse and a horse running a race—but in a snake, all the action happens on the inside.

The digestive frenzy continues for a week. Then the python's body slowly returns to normal.

So never challenge a python to an eating contest—it will beat you (no) hands down!

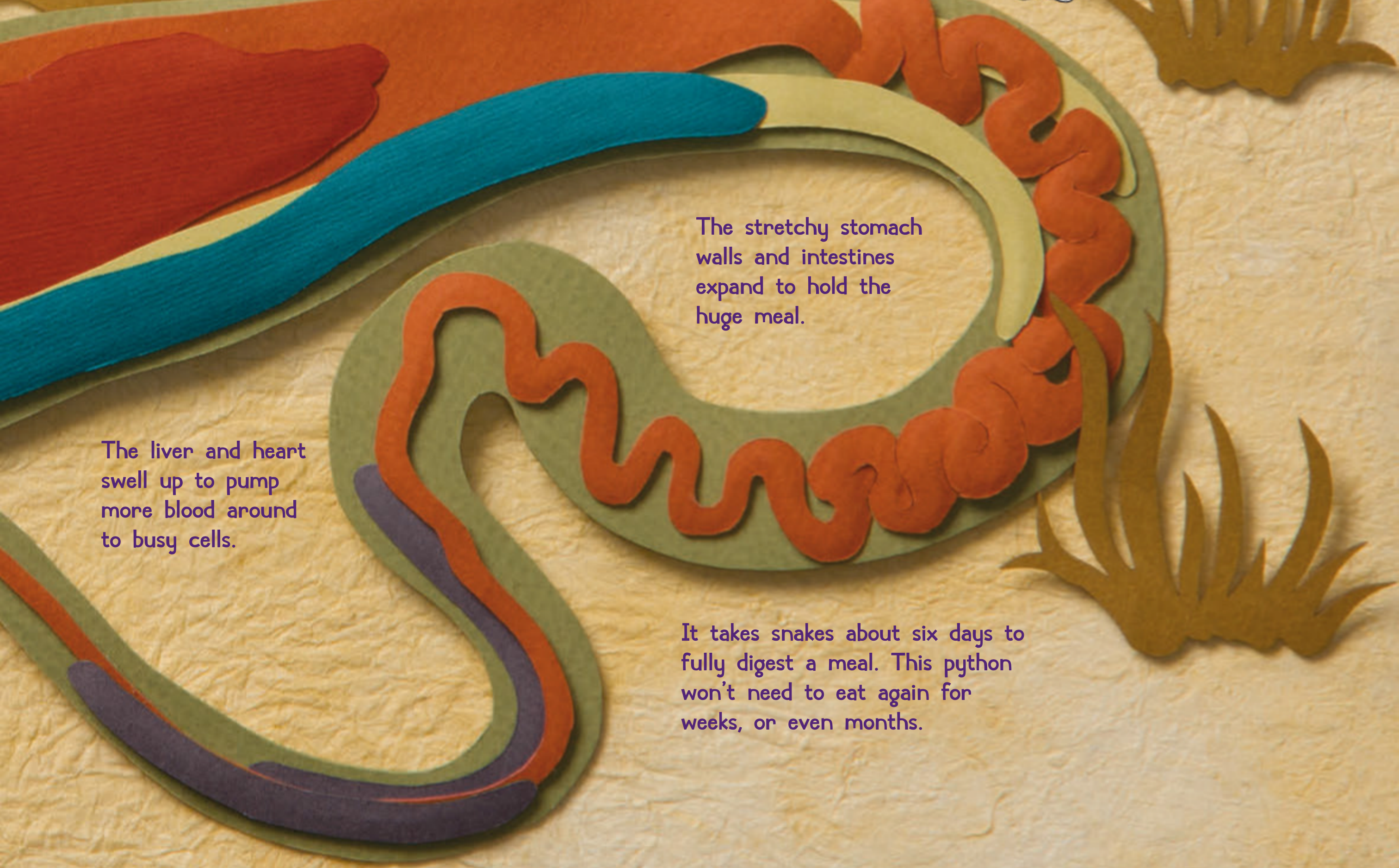
Egg Swallowers

Pythons are not the only great gulpers. For their size, small egg-eating snakes manage something almost as impressive. There are 12 known species of egg-eating snakes, most in Africa. They swallow the eggs of birds and reptiles that nest on the ground. A row of sharp spines on the inside of its backbone slices open the swallowed egg, allowing the snake to suck out the egg's insides. When it's done, it spits out the shell and moves on.



A snake's hard scales are attached to very stretchy skin underneath.

Ready for dessert?



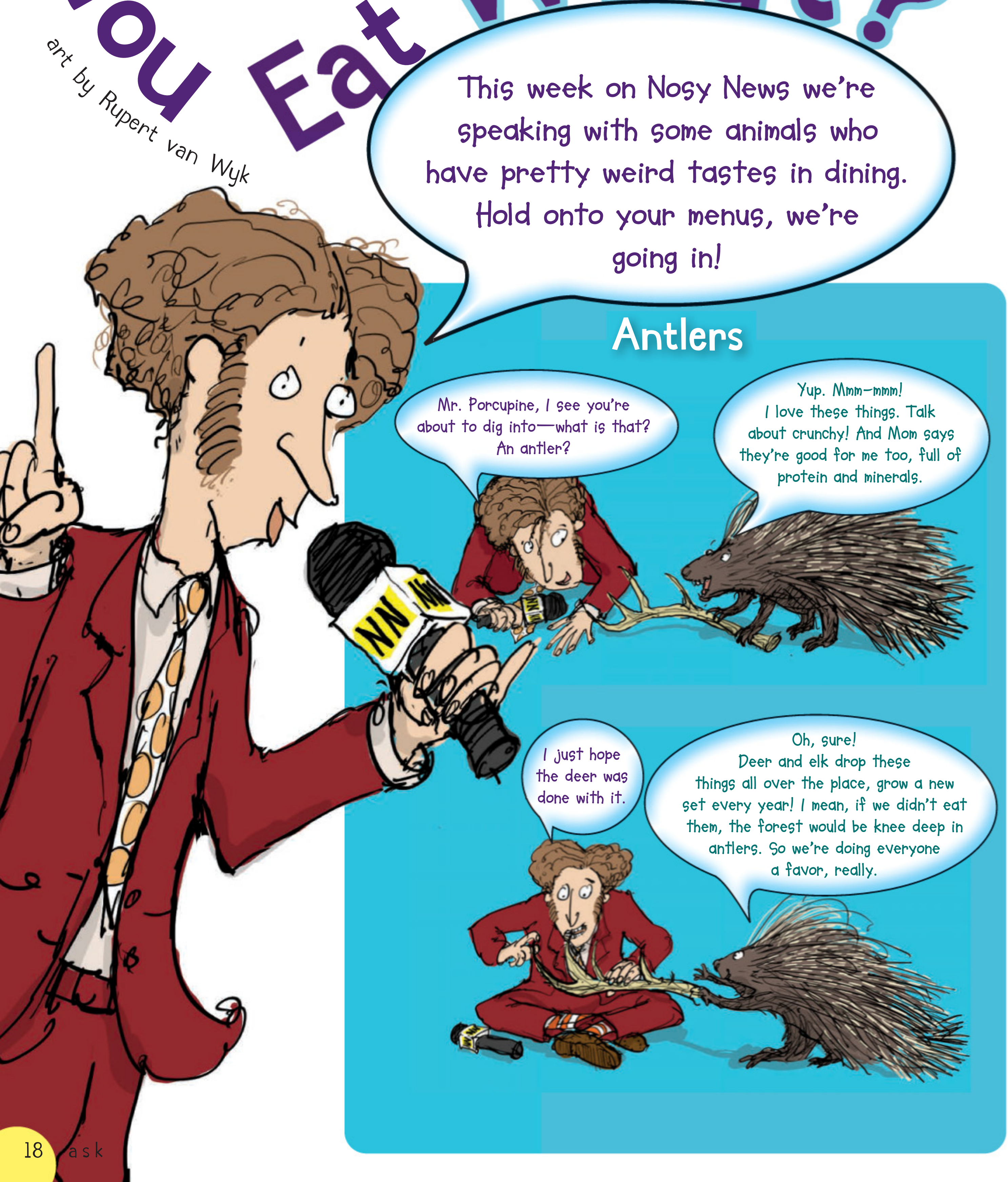
The stretchy stomach walls and intestines expand to hold the huge meal.

The liver and heart swell up to pump more blood around to busy cells.

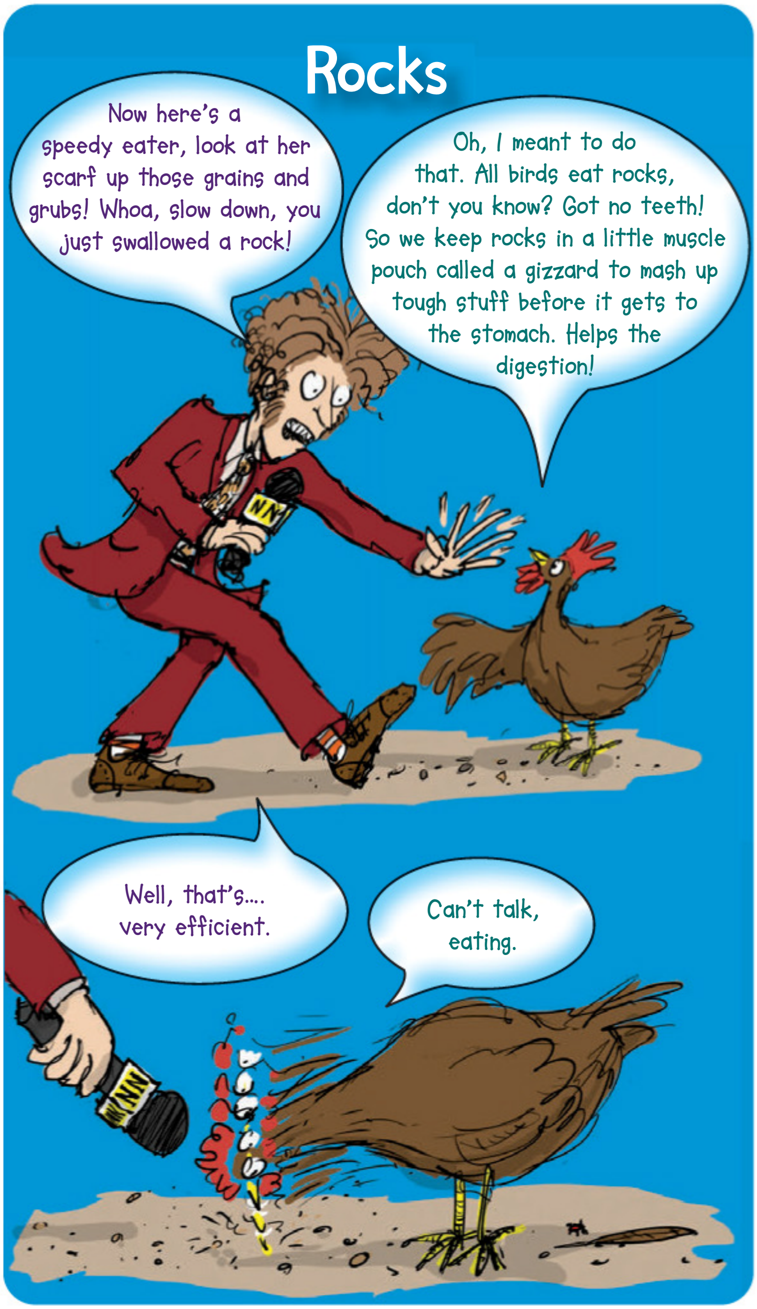
It takes snakes about six days to fully digest a meal. This python won't need to eat again for weeks, or even months.

You Eat What?

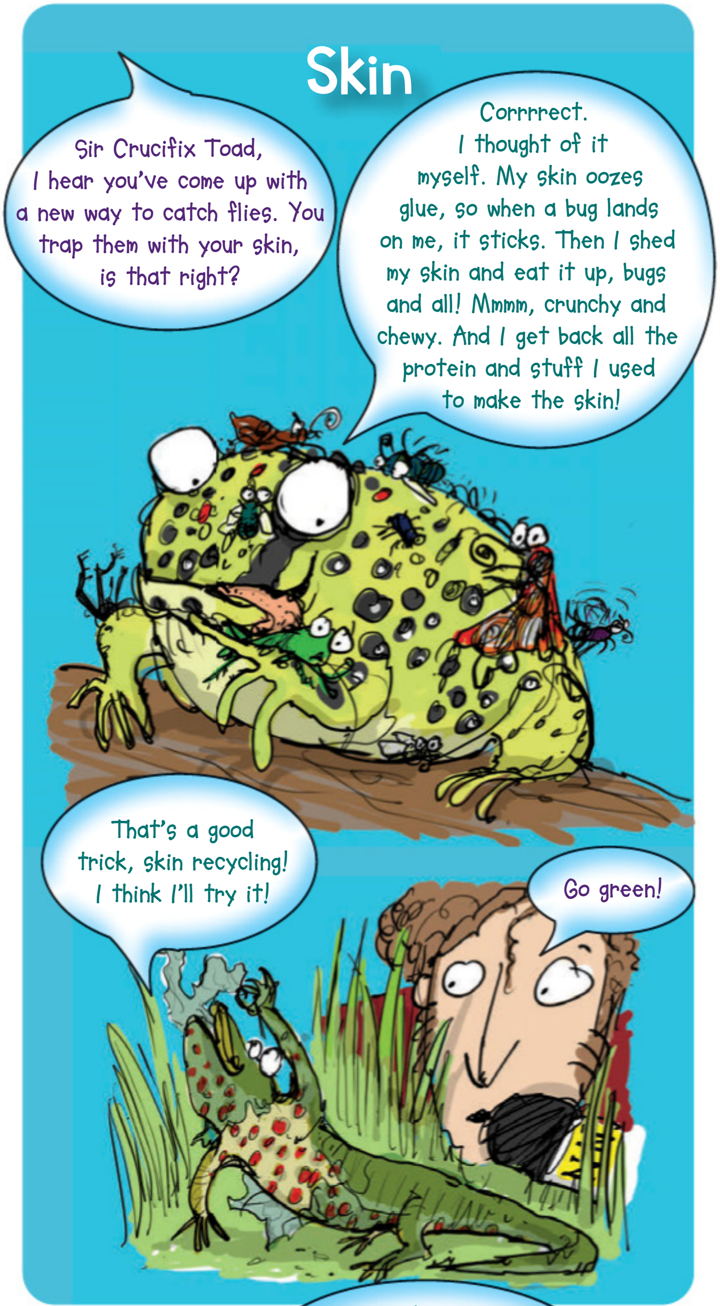
art by Rupert van Wyk


This week on Nosy News we're speaking with some animals who have pretty weird tastes in dining. Hold onto your menus, we're going in!
Antlers
Mr. Porcupine, I see you're about to dig into—what is that? An antler?
Yup. Mmm-mmm! I love these things. Talk about crunchy! And Mom says they're good for me too, full of protein and minerals.
I just hope the deer was done with it.
Oh, sure! Deer and elk drop these things all over the place, grow a new set every year! I mean, if we didn't eat them, the forest would be knee deep in antlers. So we're doing everyone a favor, really.
NN

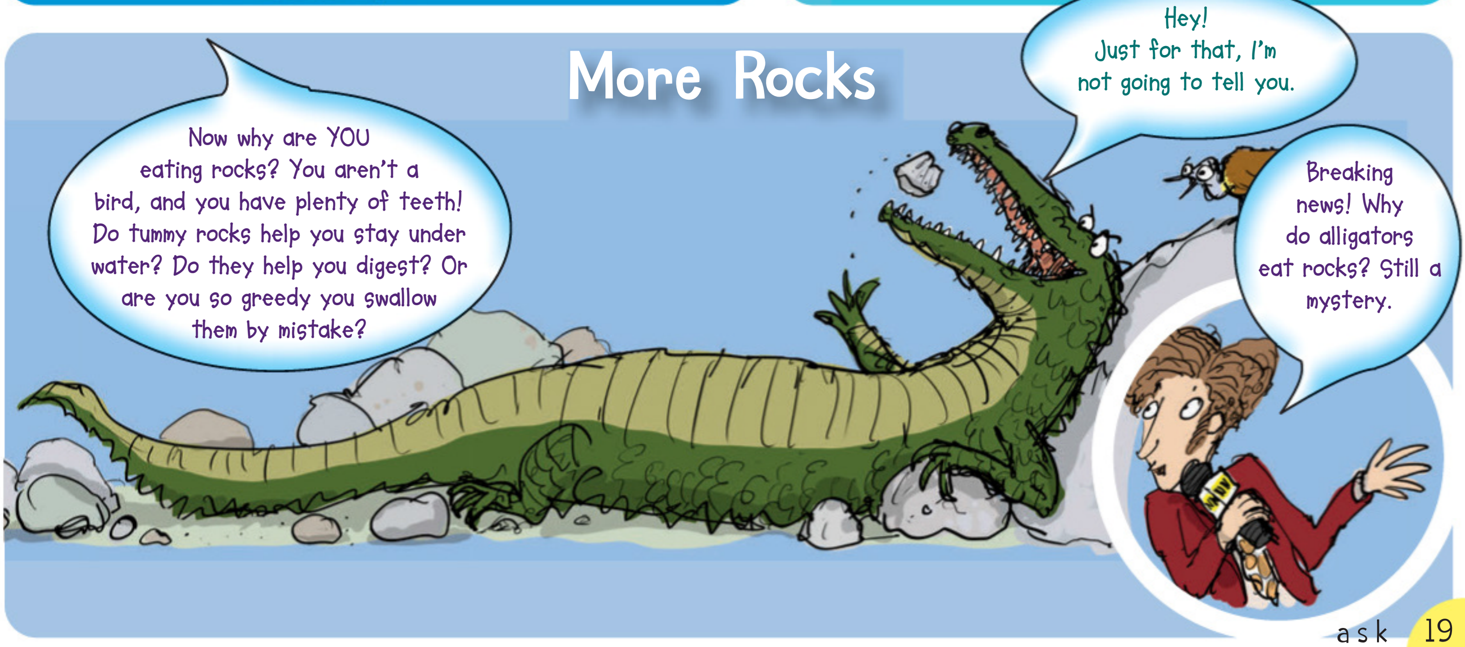
Rocks


Now here's a speedy eater, look at her scarf up those grains and grubs! Whoa, slow down, you just swallowed a rock!
Oh, I meant to do that. All birds eat rocks, don't you know? Got no teeth! So we keep rocks in a little muscle pouch called a gizzard to mash up tough stuff before it gets to the stomach. Helps the digestion!
NNN
Well, that's.... very efficient.
Can't talk, eating.
NNN

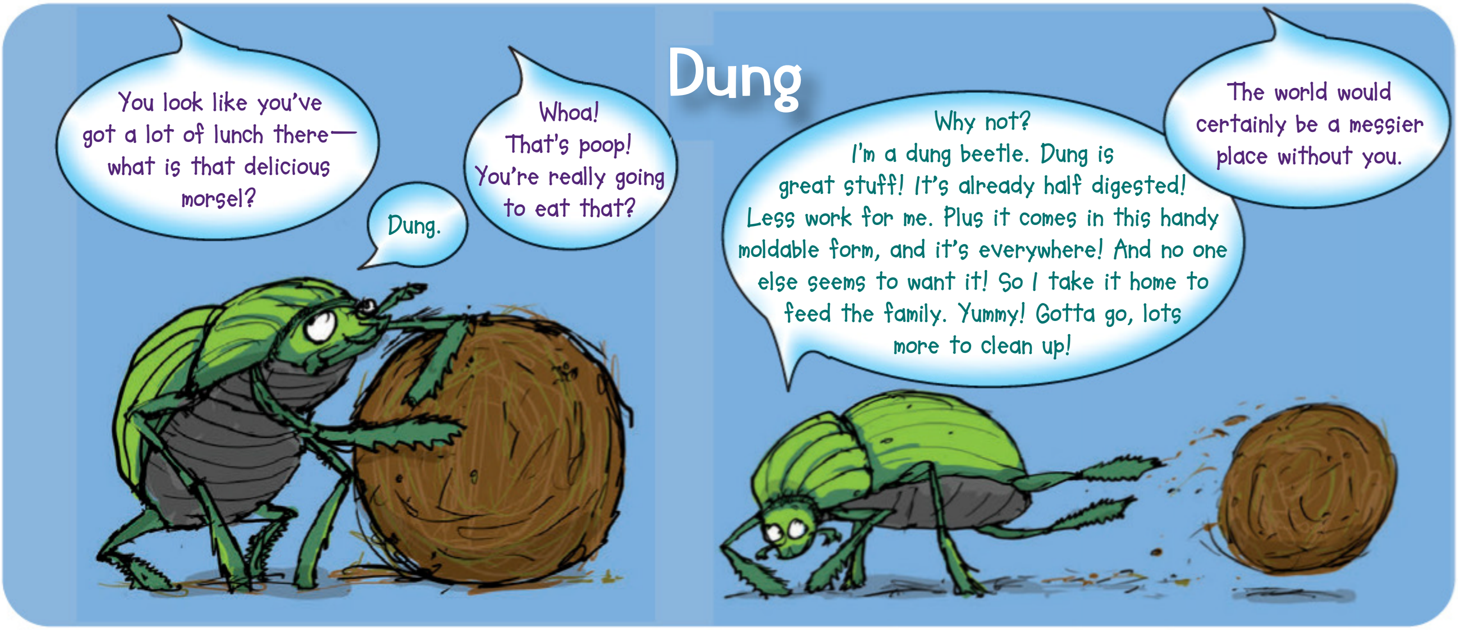
Skin


Sir Crucifix Toad, I hear you've come up with a new way to catch flies. You trap them with your skin, is that right?
Corrrect. I thought of it myself. My skin oozes glue, so when a bug lands on me, it sticks. Then I shed my skin and eat it up, bugs and all! Mmmm, crunchy and chewy. And I get back all the protein and stuff I used to make the skin!
That's a good trick, skin recycling! I think I'll try it!
Go green!

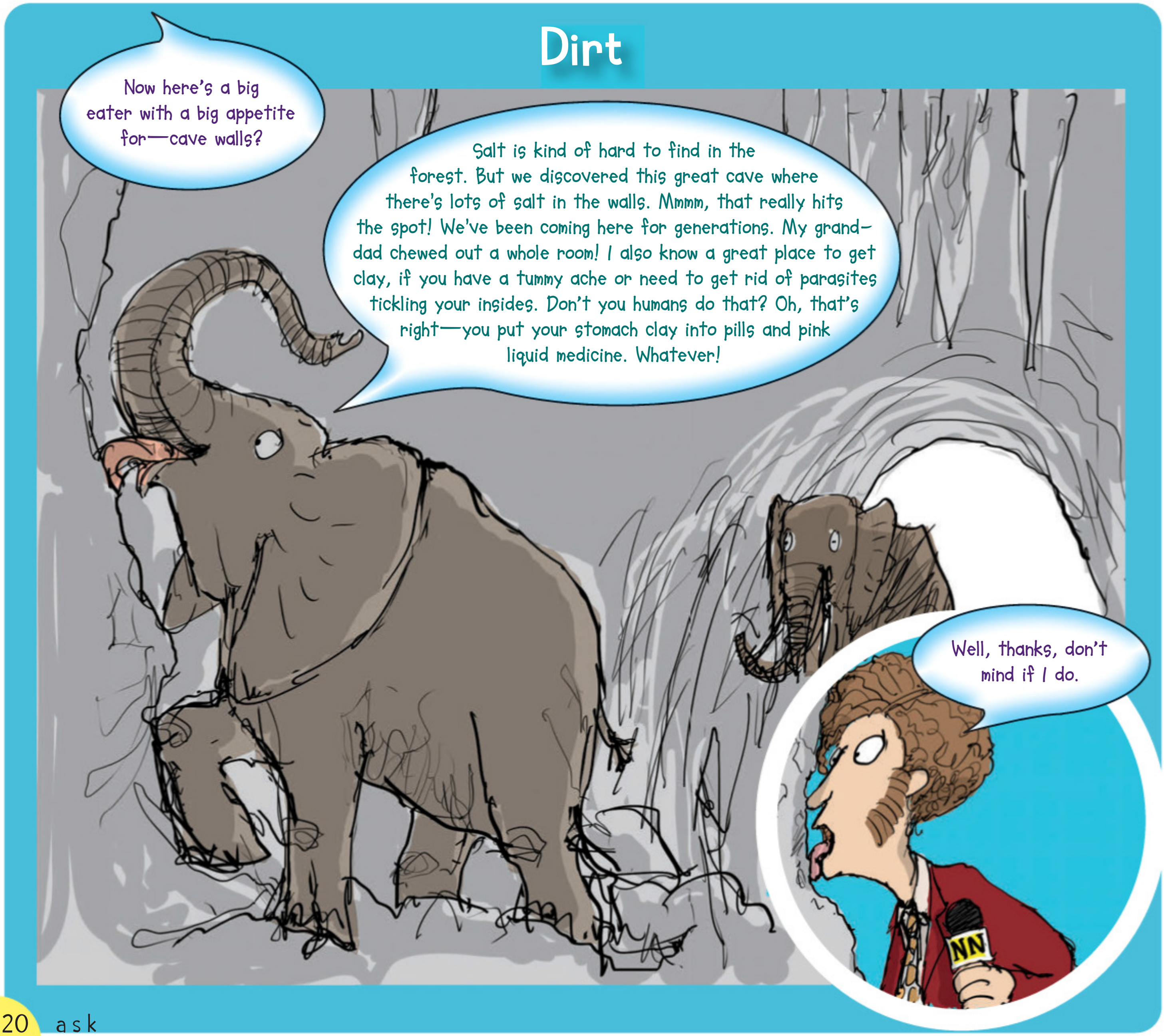
More Rocks


Now why are YOU eating rocks? You aren't a bird, and you have plenty of teeth! Do tummy rocks help you stay under water? Do they help you digest? Or are you so greedy you swallow them by mistake?
Hey! Just for that, I'm not going to tell you.
Breaking news! Why do alligators eat rocks? Still a mystery.
NNN

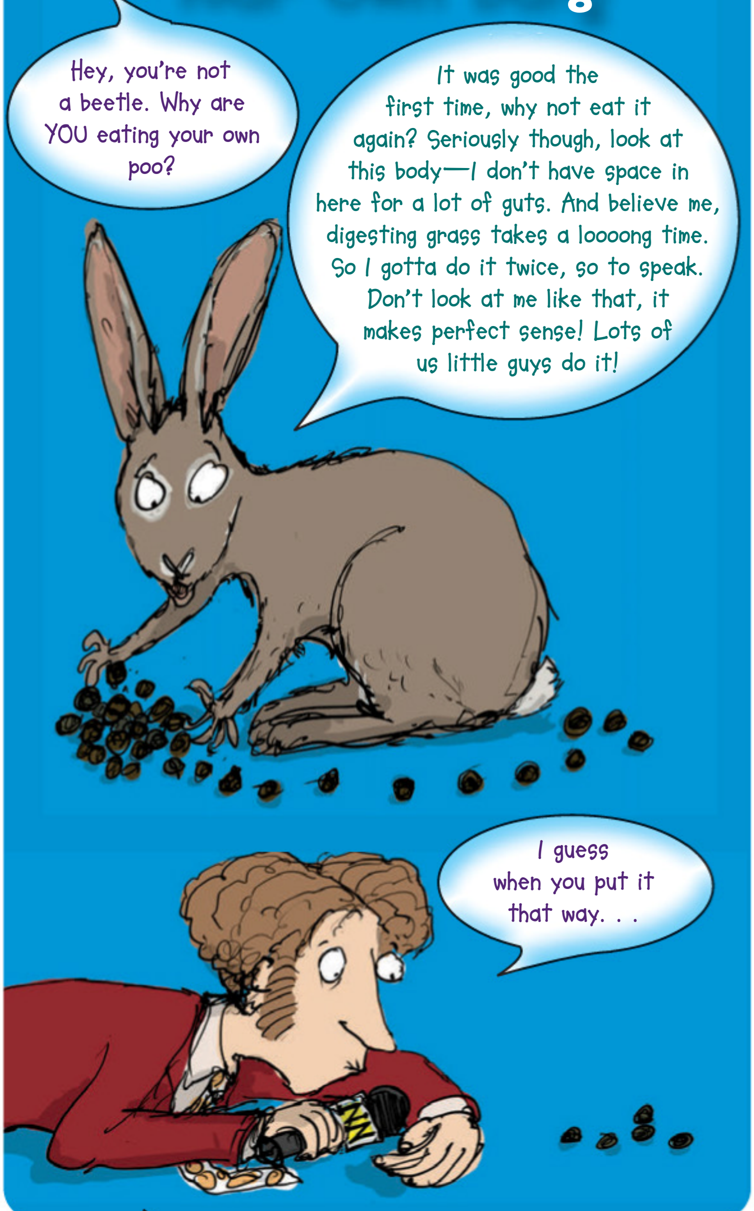
Dung


You look like you've got a lot of lunch there—what is that delicious morsel?
Dung.
Whoa! That's poop! You're really going to eat that?
Why not? I'm a dung beetle. Dung is great stuff! It's already half digested! Less work for me. Plus it comes in this handy moldable form, and it's everywhere! And no one else seems to want it! So I take it home to feed the family. Yummy! Gotta go, lots more to clean up!
The world would certainly be a messier place without you.

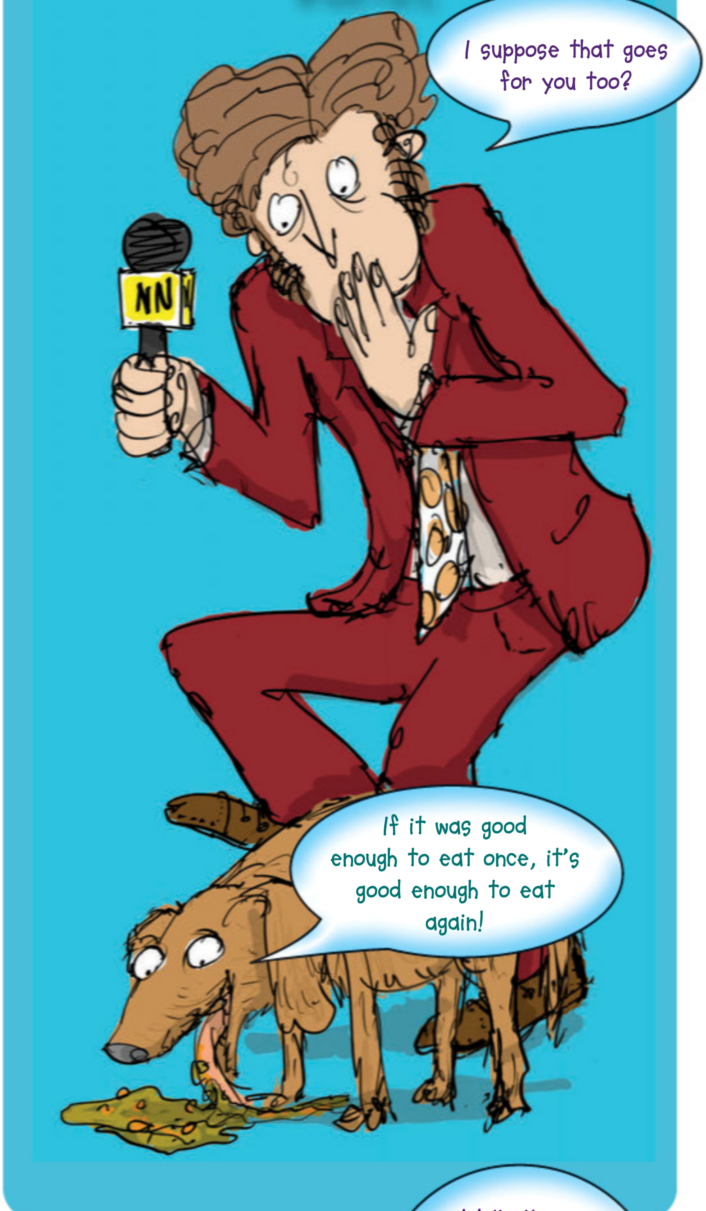
Dirt


Now here's a big eater with a big appetite for—cave walls?
Salt is kind of hard to find in the forest. But we discovered this great cave where there's lots of salt in the walls. Mmmm, that really hits the spot! We've been coming here for generations. My grand-dad chewed out a whole room! I also know a great place to get clay, if you have a tummy ache or need to get rid of parasites tickling your insides. Don't you humans do that? Oh, that's right—you put your stomach clay into pills and pink liquid medicine. Whatever!
Well, thanks, don't mind if I do.
NN

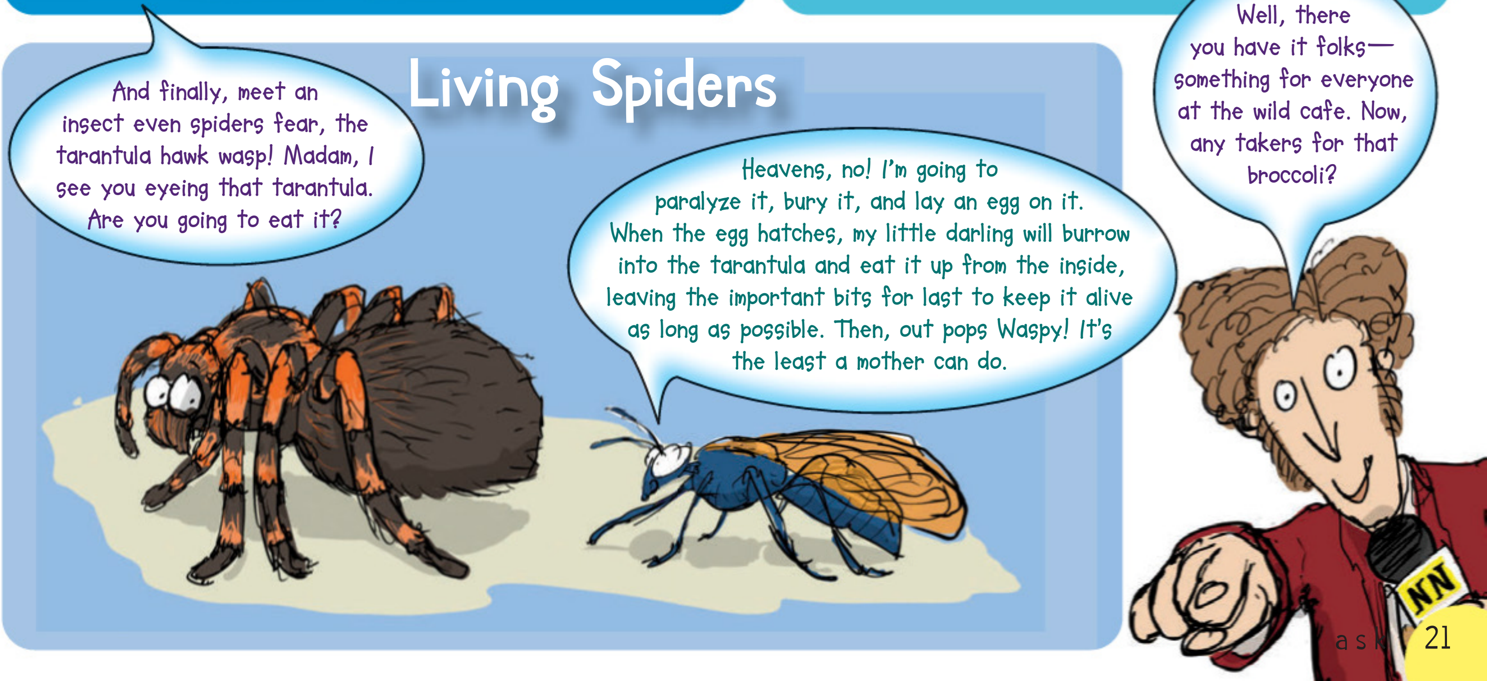
Your Own Dung


Hey, you're not a beetle. Why are YOU eating your own poo?
It was good the first time, why not eat it again? Seriously though, look at this body—I don't have space in here for a lot of guts. And believe me, digesting grass takes a loooong time. So I gotta do it twice, so to speak. Don't look at me like that, it makes perfect sense! Lots of us little guys do it!
I guess when you put it that way. . .
NN

Vomit


I suppose that goes for you too?
NN
If it was good enough to eat once, it's good enough to eat again!

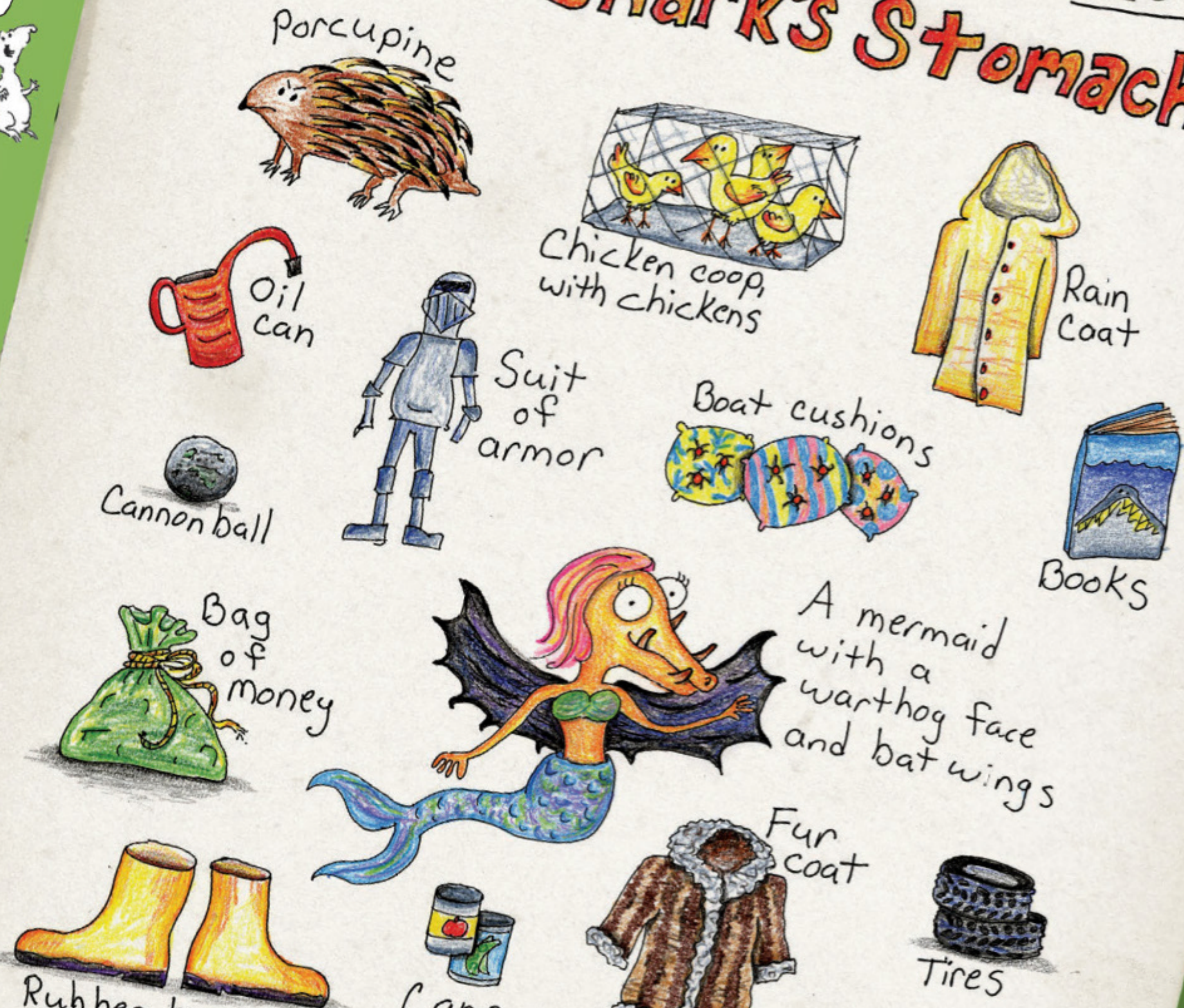
Living Spiders

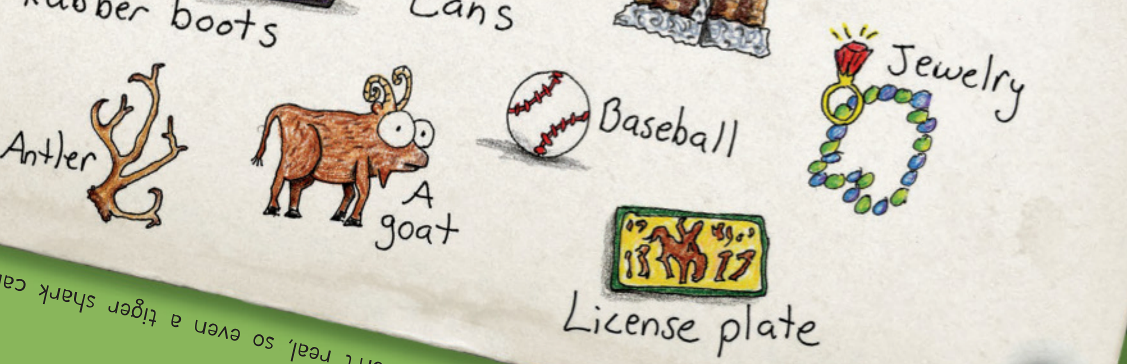

And finally, meet an insect even spiders fear, the tarantula hawk wasp! Madam, I see you eyeing that tarantula. Are you going to eat it?
Heavens, no! I'm going to paralyze it, bury it, and lay an egg on it. When the egg hatches, my little darling will burrow into the tarantula and eat it up from the inside, leaving the important bits for last to keep it alive as long as possible. Then, out pops Waspy! It's the least a mother can do.
Well, there you have it folks—something for everyone at the wild cafe. Now, any takers for that broccoli?
NN

My Show-and-Tell Project

Which of these items was **Not** found in a Shark's Stomach?

I'm impressed!


Porcupine
Chicken coop, with chickens
Rain Coat
Oil can
Suit of armor
Boat cushions
Cannonball
Books
Bag of money
A mermaid with a warthog face and bat wings
Fur coat
Tires
Rubber boots
Cans

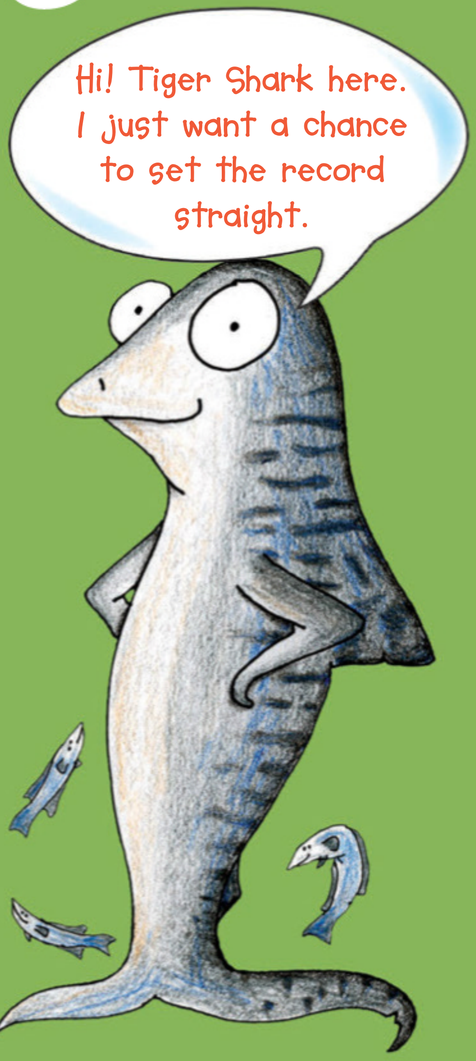

Jewelry
Antler
A goat
Baseball
License plate

It was the tires, right?

Answer: Mermaids aren't real, so even a tiger shark can't eat one.

The Very Hungry Tiger Shark

art by Heather Hopp-Bruce


Hi! Tiger Shark here. I just want a chance to set the record straight.

OK, I may have eaten some funny things. But it's not my fault!

See, we tiger sharks are predators. And we're really good at it! We'll eat fish, seals, turtles, jellyfish, squid, crabs—pretty much anything we can catch. Not much escapes these teeth, let me tell you.

The secret of our success is: chomp first and ask questions later. Other sharks are more choosy, but if a tiger shark sees something in the water—BAM, gulp! If it moves, eat it! This strategy has kept us at the top of the food chain for millions of years.

But now it's causing us a bit of a problem. That's because frankly, these days the ocean is full of weird stuff! Sometimes when I go after a shiny fish, it turns out to be a license plate. Bleh! Too late, I've already eaten it.

But really, what's a license plate doing down here??? If it's in the ocean, it should be something I can eat!

I'm just hunting in the stupendously efficient way tiger sharks always have. Please, instead of making fun of us for eating weird stuff, get all that weird stuff out of our lunchroom! If your keep your boots on land, I promise you, I won't eat them.

Thanks,
Tiger Shark

WHEN PLANTS

Just like people, plants need food to stay alive. But some plants have an unusual diet. They eat insects! Once a bug lands on one of these sneaky plants, chances are it won't escape. It becomes lunch instead.

Please don't eat me.

Why do some plants have such a quirky diet? Because that's the best way for them to get the good nutrition they need.

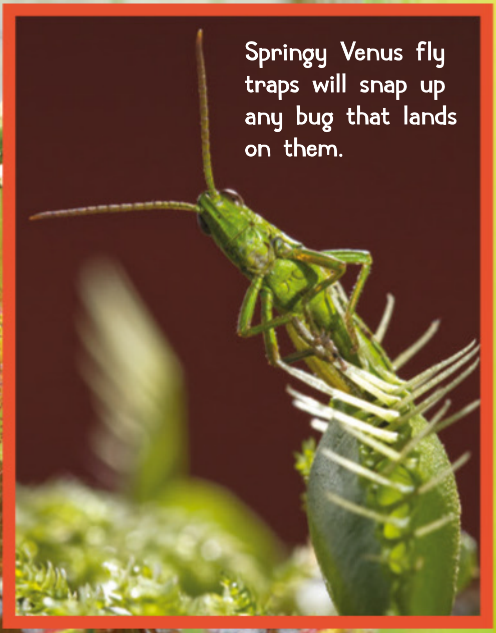
Most carnivorous (insect-eating) plants contain chlorophyll and can make their own food from sunlight, air, and water, just like other plants. But they also need protein (just as you do) for their cells to be healthy and strong.

Plants that grow in good soil make protein from nitrogen and minerals they suck up from the ground through their roots. But carnivorous plants grow in bogs, swamps, and marshy places where there is little nitrogen in the soil. The ingredients to make protein aren't down in the ground, but flying and crawling around them.

All animals, even tiny flies and spiders, contain nitrogen (for their own body protein). By trapping and digesting insects, carnivorous plants are able to get the protein their cells need.

But how can a plant catch a bug? Each family of carnivorous plants has its own devious ways of capturing prey. Take a look!

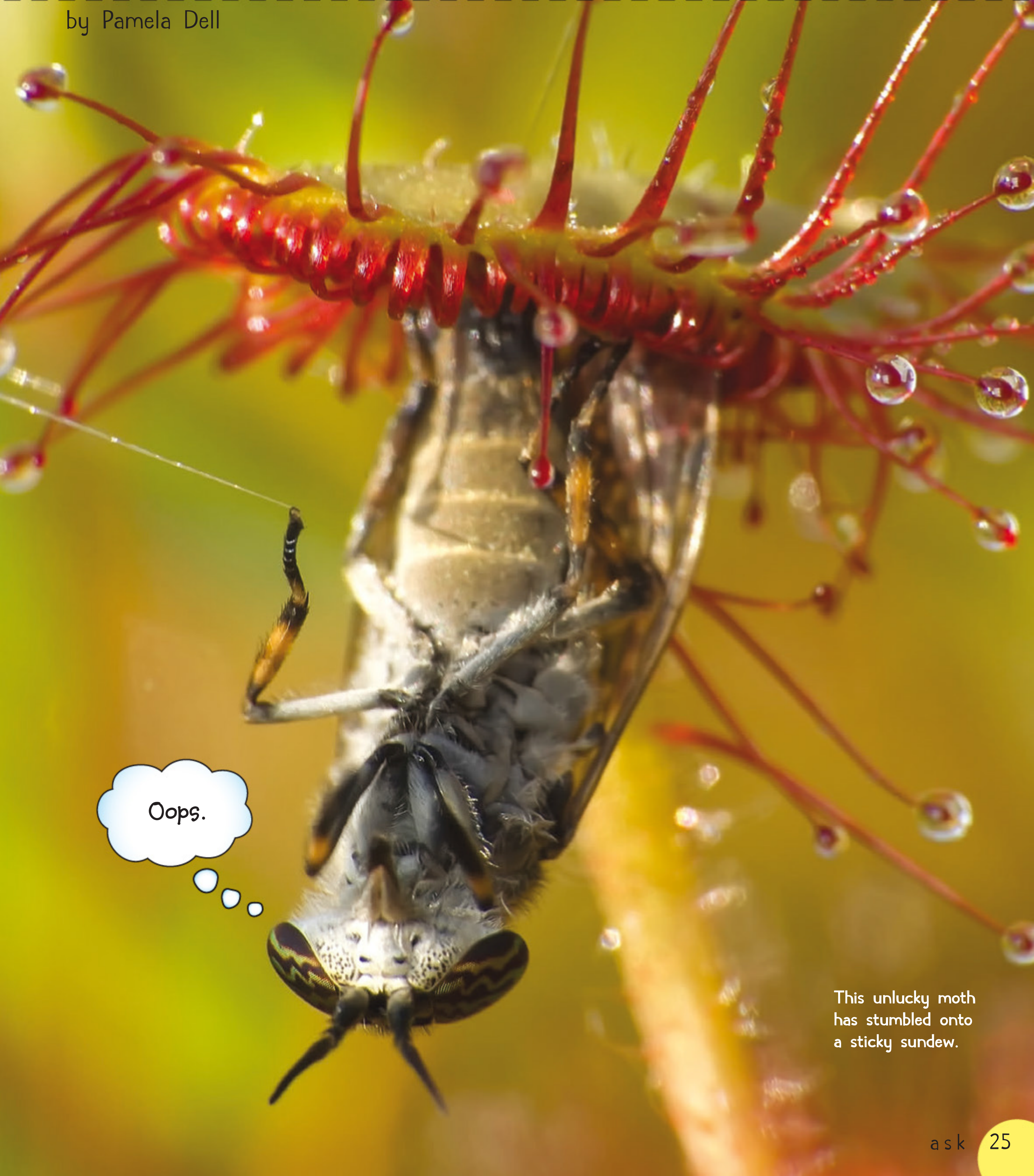
Carnivorous plants often live in wet, boggy places.



Springy Venus fly traps will snap up any bug that lands on them.

GET HUNGRY

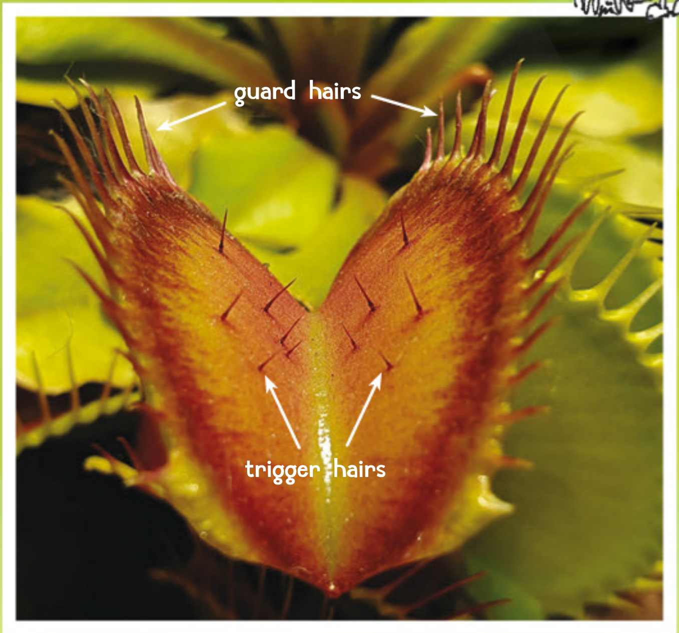
by Pamela Dell



This unlucky moth has stumbled onto a sticky sundew.

TRIGGER TRAPS

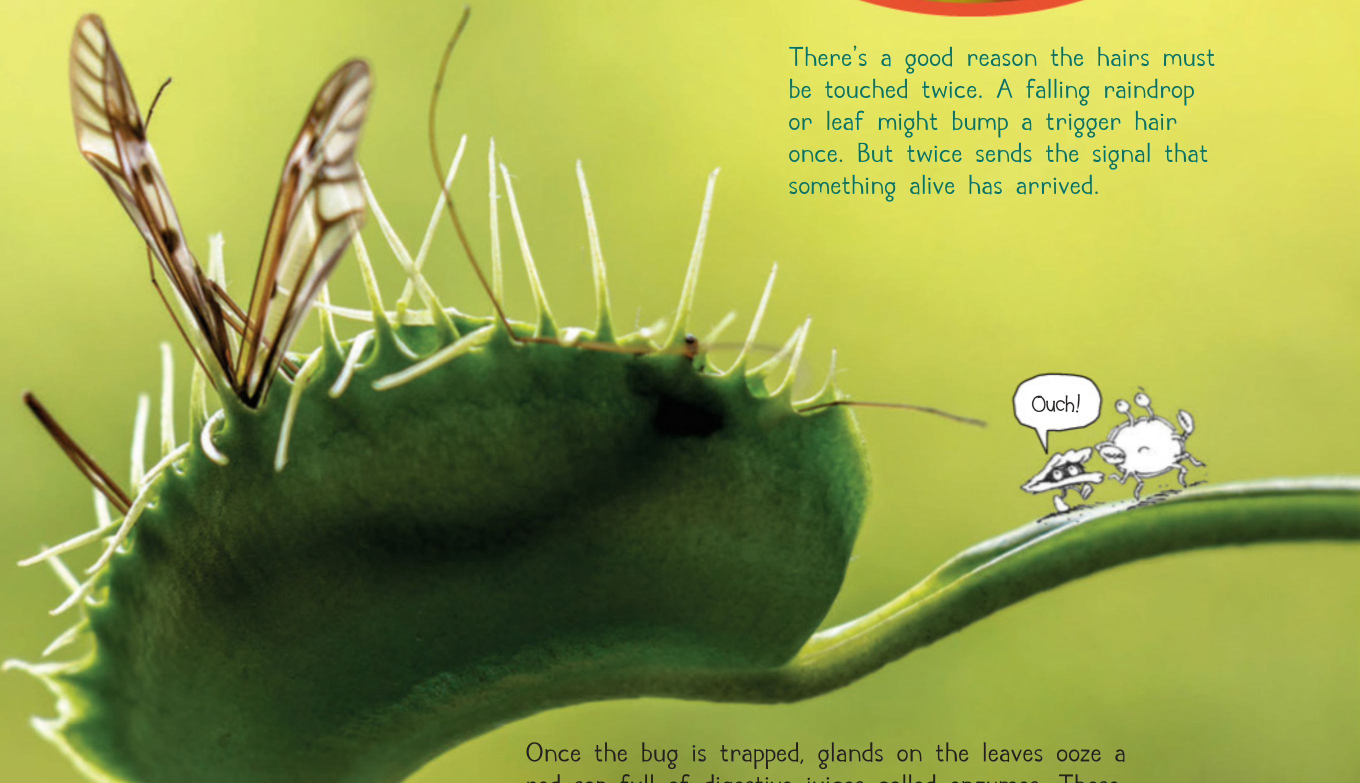
STOP
DO NOT ENTER



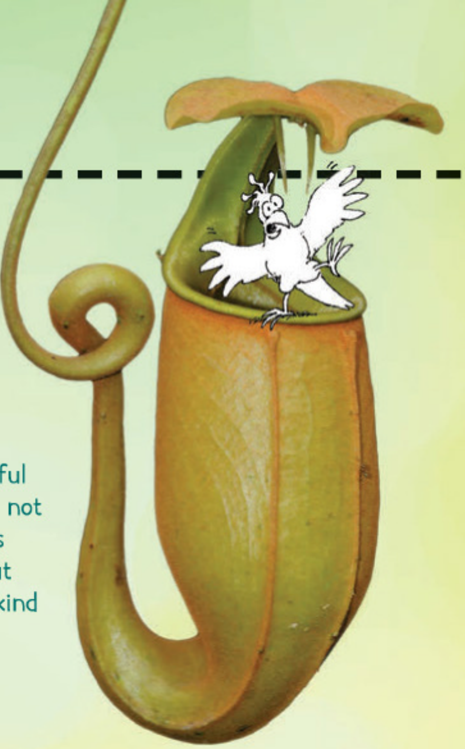
The Venus fly trap has leaves that open like jaws. Sharp "guard hairs" grow from the edges of each leaf. Inside are trigger hairs that tell the plant to close. The inside is covered in sweet nectar.

Venus fly traps open their leaves to display sweet nectar. Attracted by the nectar, an insect comes calling. If the bug touches any of the trigger hairs twice within about 20 seconds, the jaws of the Venus fly trap snap shut, trapping the insect inside.

There's a good reason the hairs must be touched twice. A falling raindrop or leaf might bump a trigger hair once. But twice sends the signal that something alive has arrived.



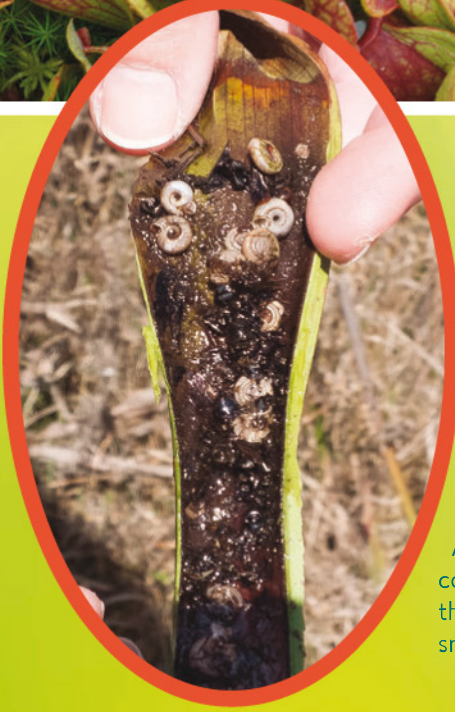
Once the bug is trapped, glands on the leaves ooze a red sap full of digestive juices called enzymes. These enzymes dissolve the insect into a liquid the plant can absorb as food. Digestion lasts about ten days. Then the leaf opens again, ready for its next meal.



The colorful pitcher is not the plant's flower, but a special kind of leaf.

PITFALL TRAPS

Pitcher plants are like swimming pools of death for some unlucky insects. The leaves of the pitcher plant form small, slender tubes, or pitchers, that collect rainwater. Sweet nectar oozes inside the pitcher, luring insects to its rim. Nectar also makes the sides of the pitcher slick and slippery. Bugs that land on the edge slip and slide straight down into the pool of water at the bottom of the pitcher. A ring of downward-pointing hairs keep them trapped. After the bug drowns, it is digested by the plant.

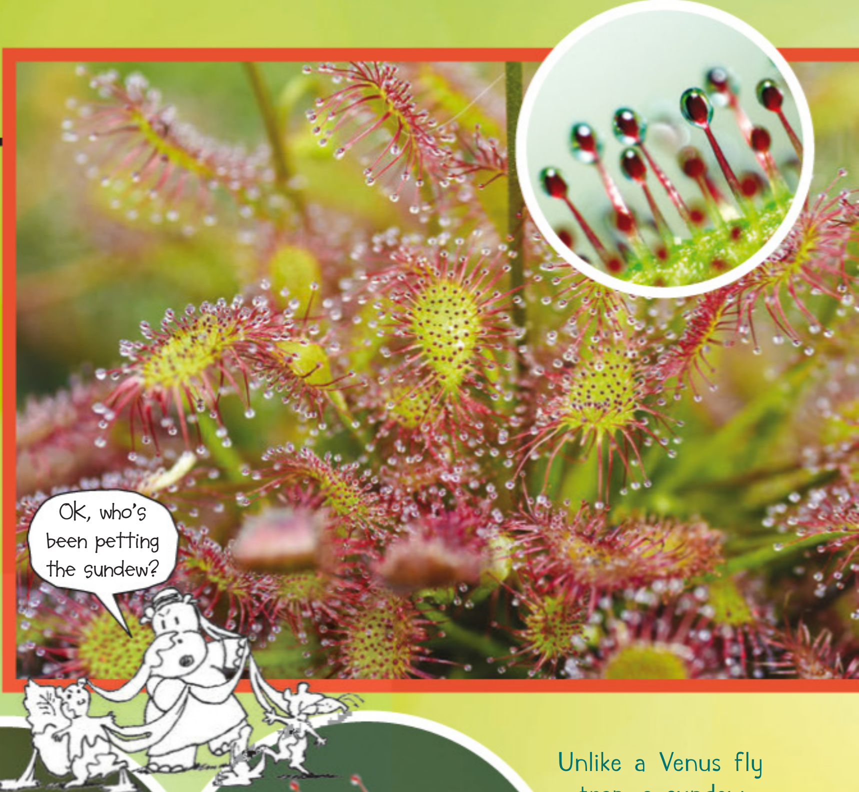


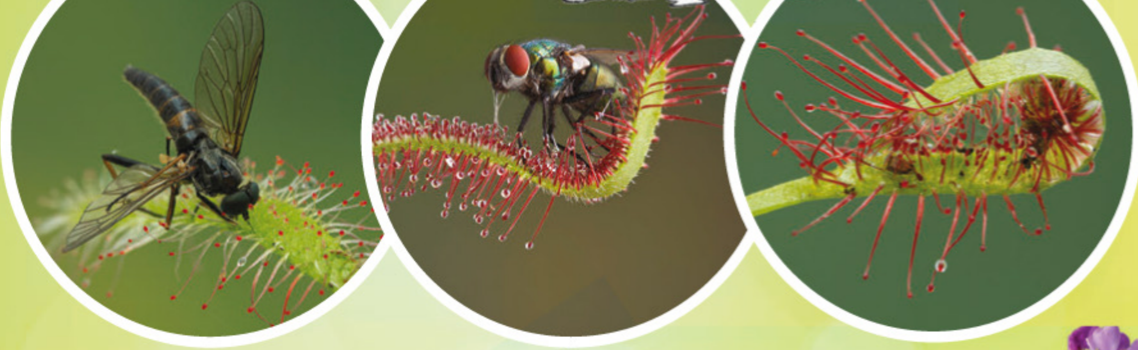
Pitcher plants digest only the soft insides of the insect. The hard shells, or exoskeletons, drop to the bottom of the plant, where they build up. This pitcher plant has been cut in half to show the plant's former victims. A large plant might contain the remains of thousands of bugs (and snails)!

This little frog has found a good place to wait for an insect meal—inside a pitcher plant. Attracted to the plant's nectar, many insects stop by. But sometimes a frog slips, and itself ends up as a meal for the plant.

STICKY TRAPS

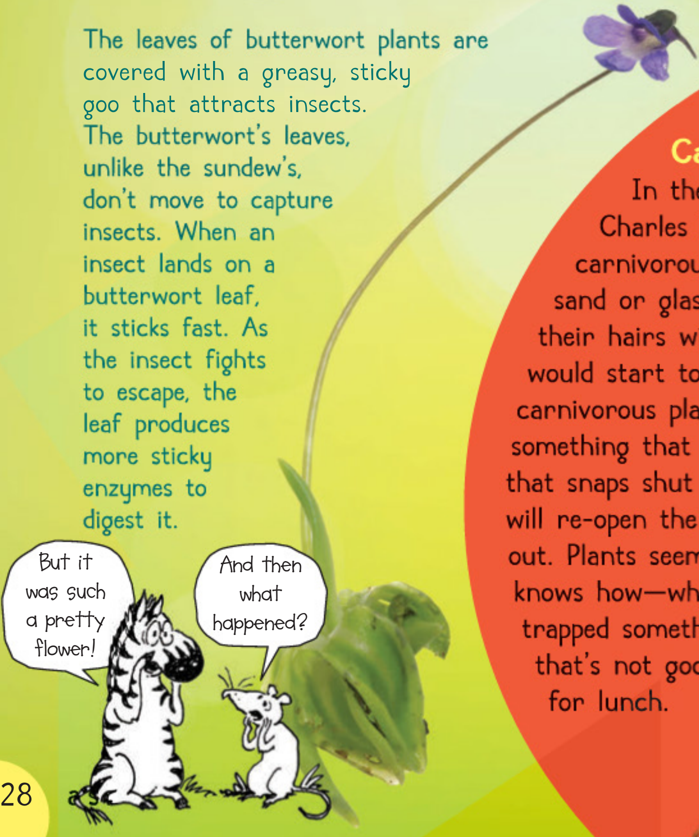
Sundews get their name from the sticky hairs that cover their leaves. It looks like dew glistening in the sun, but it's actually digestive juices made by glands in the sundew's leaves. Insects can't resist the shining dew, but instead of a drink, they get stuck. As they wriggle to get free, they brush more and more sticky hairs. The leaf bends to trap the bug alive, and the sticky droplets suffocate it.





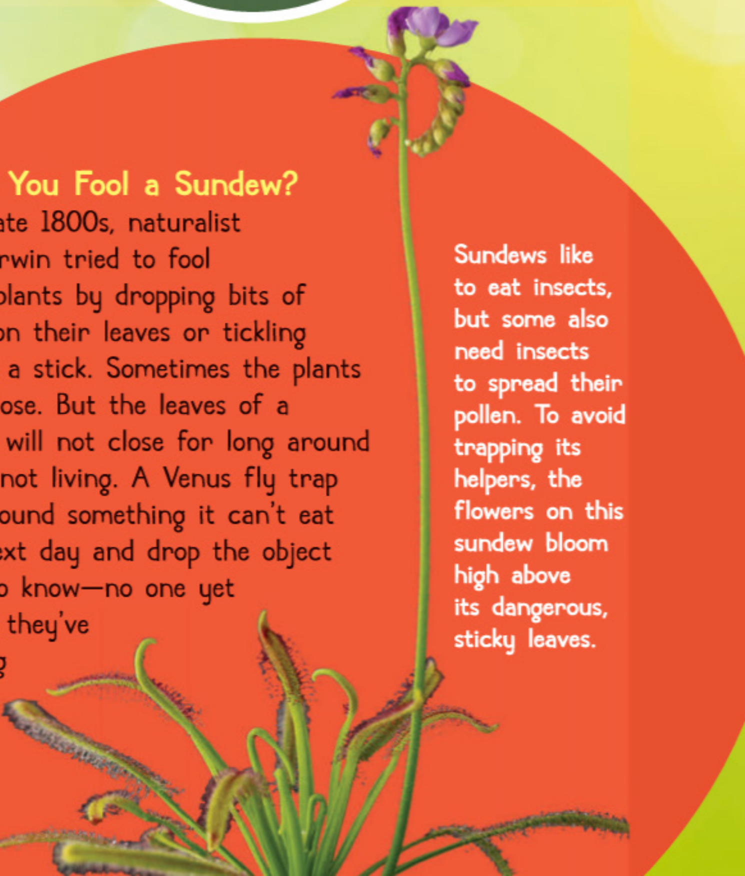
Unlike a Venus fly trap, a sundew leaf doesn't snap shut. Once its prey is stuck, the leaf can take hours to fold over and begin digestion.

The leaves of butterwort plants are covered with a greasy, sticky goo that attracts insects. The butterwort's leaves, unlike the sundew's, don't move to capture insects. When an insect lands on a butterwort leaf, it sticks fast. As the insect fights to escape, the leaf produces more sticky enzymes to digest it.


But it was such a pretty flower!
And then what happened?

Can You Fool a Sundew?

In the late 1800s, naturalist Charles Darwin tried to fool carnivorous plants by dropping bits of sand or glass on their leaves or tickling their hairs with a stick. Sometimes the plants would start to close. But the leaves of a carnivorous plant will not close for long around something that is not living. A Venus fly trap that snaps shut around something it can't eat will re-open the next day and drop the object out. Plants seem to know—no one yet knows how—when they've trapped something that's not good for lunch.

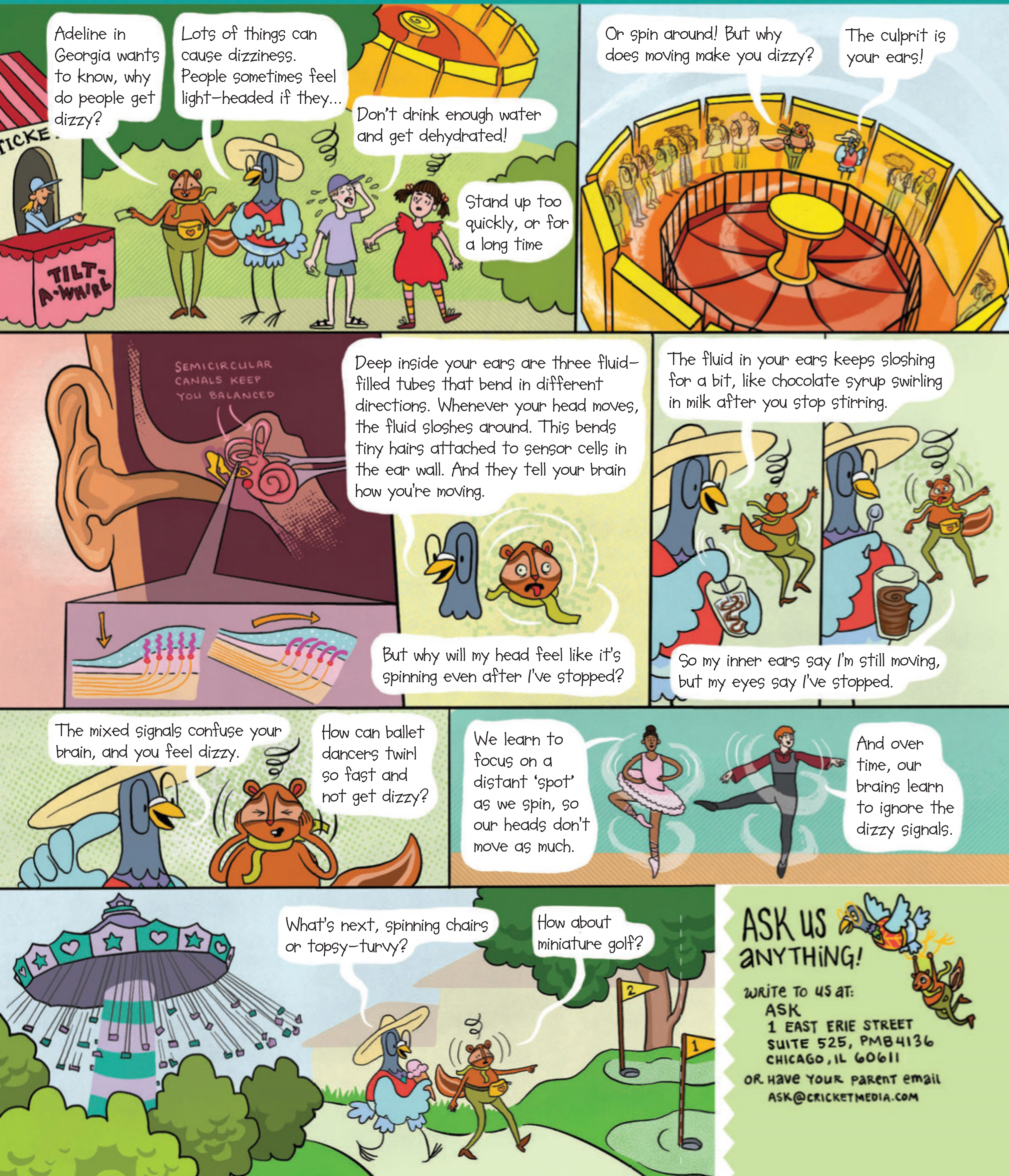


Sundews like to eat insects, but some also need insects to spread their pollen. To avoid trapping its helpers, the flowers on this sundew bloom high above its dangerous, sticky leaves.

Ask Ask

WITH SAGE AND BRIAR

Text by Ellen R. Braaf
Art by Marnie Galloway


Adeline in Georgia wants to know, why do people get dizzy?
Lots of things can cause dizziness. People sometimes feel light-headed if they...
Don't drink enough water and get dehydrated!
Stand up too quickly, or for a long time
TICKE
TILT-A-WHIRL
Or spin around! But why does moving make you dizzy?
The culprit is your ears!
SEMICIRCULAR CANALS KEEP YOU BALANCED
Deep inside your ears are three fluid-filled tubes that bend in different directions. Whenever your head moves, the fluid sloshes around. This bends tiny hairs attached to sensor cells in the ear wall. And they tell your brain how you're moving.
But why will my head feel like it's spinning even after I've stopped?
The fluid in your ears keeps sloshing for a bit, like chocolate syrup swirling in milk after you stop stirring.
So my inner ears say I'm still moving, but my eyes say I've stopped.
The mixed signals confuse your brain, and you feel dizzy.
How can ballet dancers twirl so fast and not get dizzy?
We learn to focus on a distant 'spot' as we spin, so our heads don't move as much.
And over time, our brains learn to ignore the dizzy signals.
What's next, spinning chairs or topsy-turvy?
How about miniature golf?
2
1

ASK US ANYTHING!

Write to us at:
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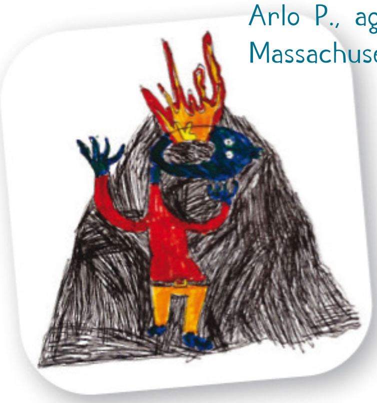
SUITE 525, PMB4136
CHICAGO, IL 60611
or have your parent email
ASK@CRICKETMEDIA.COM

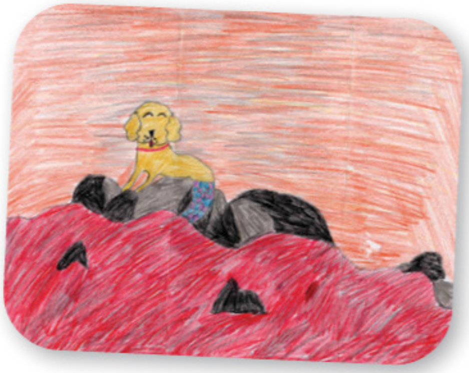
CONTEST and LETTERS

Send your letters to Ask, 1 East Erie Street, Suite 525, PMB4136, Chicago, IL 60611, or have your parent/guardian email us at ask@cricketmedia.com.

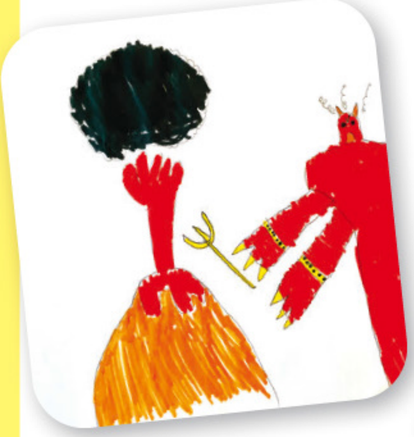
In our February issue we asked you to draw us a picture of a lava-loving creature. Thanks to all you visionary vulcanologists for firing us up!



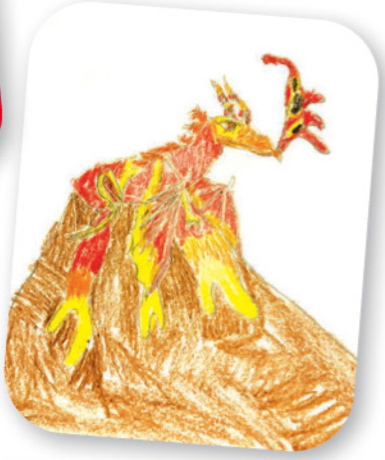
Arlo P., age 8, Massachusetts



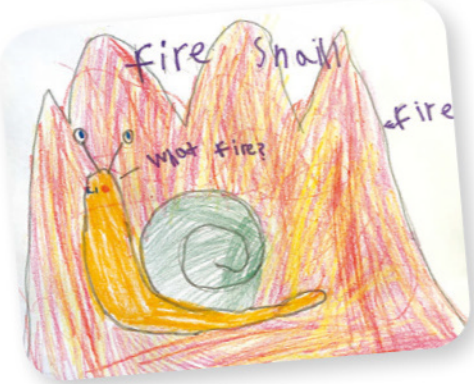
Elena M., age 10, Michigan



Brendan S., age 9, South Dakota



Cora M., age 9, Washington



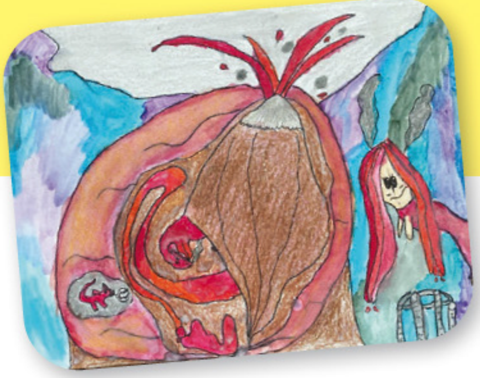
Fire Snail
Thea F., age 8, Washington

Dear Elvis,
How do birds fly?
Will D.N.,
New York

Dear Will,
Very beautifully, don't you agree?
Up Up and Away!
Elvis

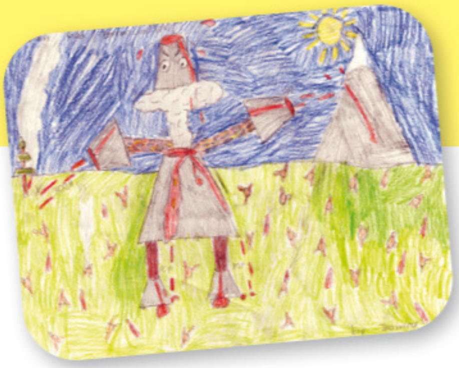
Dear Marvin,
Do you have any good pranks? I do. Put a bucket of water on the top of Plush's door and make her really mad. She will bust in the door and it will drop on her!
Lucia L.,
Michigan

Dear Lucia,
Well, it was a good plan... Marvin told Plush he'd eaten all the cake batter, but then when she chased him he forgot and opened the door first. Oops. He's drying off but wanted me to tell you we'll get it right next time!
Prankster in training,
Rats



Isabella S., age 9, Hawaii

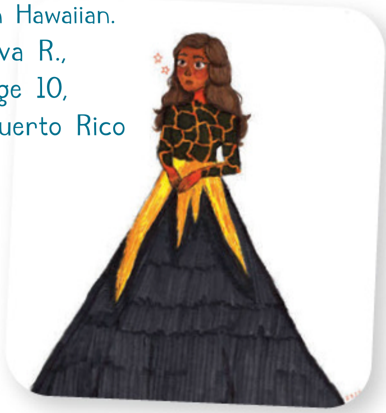
Livia D.,
age 8,
New York

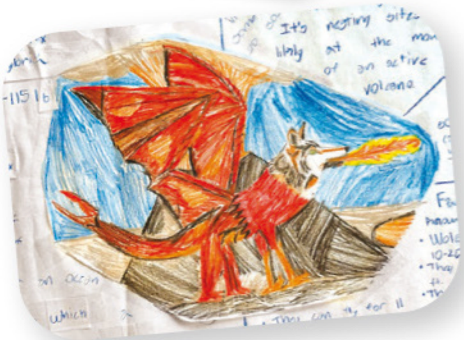


Thermoblast, Lava God
Thomas M., age 9, Canada

Lava goddess Kia, which means Guardian or Protector in Hawaiian.

Eva R.,
age 10,
Puerto Rico

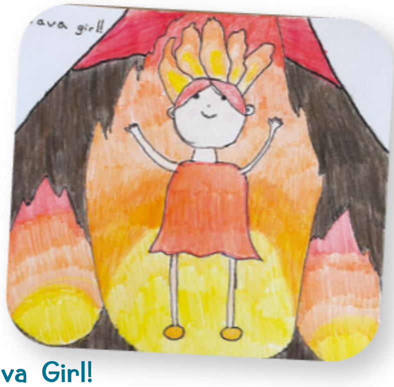




It's nesting sites
likly at the
of an active
volcano
on ocean
which

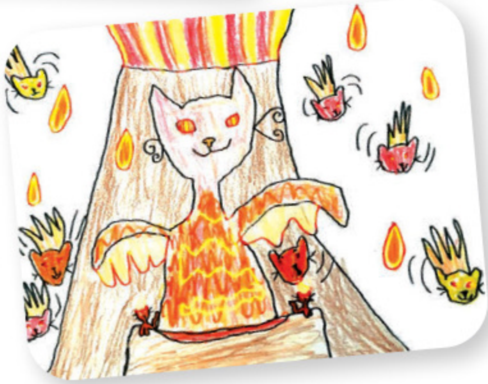
Wolagonix (a hybrid of a dragon, phoenix and wolf), nests on volcanoes

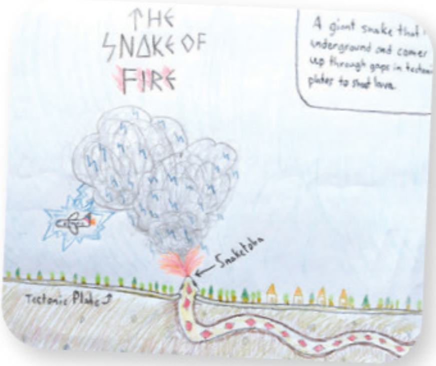
Gabe GB, age 9,
Kansas



Lava Girl!
Grace K., age 11, Maryland

Volcano Purrupon!
Roark B.,
age 10,
California





THE SNAKE OF FIRE
A giant snake that
underground and comes
up through gaps in tecton
plates to shoot lava.
Snaketoba
Tectonic Plate

The Snake of Fire
Thomas K.,
age 9,
Maryland

Dear Ask,
I am wondering if you could tell me how you always choose the people who are the contest winners?
Sincerely,
Adri L.,
Utah

Dear Adri,
We get so many beautiful, fantastic pictures every month! We start by looking at all the entries together and choosing only our absolute total favorites. Then we realize that we've picked them all. But we don't have enough space! We need 100 more pages. It is terrible! So we get Zia to do it. She chooses by a mysterious process which might involve singing and seeing which ones make all her fur stand on end. I'm pretty sure that's how big museums pick art. WE LOVE ALL YOUR ART SO MUCH!
Keep making and imagining!
We are your biggest fans!!!
The Ask Gang

July/August Contest

Critter **Cake**

You may not know when your pet's birthday is, but that's no reason not to have a party! For this month's contest, design a magnificent birthday cake for your special friend or favorite wild animal, full of their favorite things to eat. Keep the chocolate for yourself, and think, what would Turtle Tim really like? Send us a picture of the lucky birthday animal with their special treat, and we'll host a party for them in an upcoming issue of *Ask*.

Contest Rules:

1. Your contest entry must be your very own work. Ideas and words should not be copied.
2. Be sure to include your name, age, and address on your entry.
3. Only one entry per person, please.
4. If you want your work returned, enclose a self-addressed, stamped envelope.
5. Your entry must be signed or emailed by a parent or legal guardian, saying it's your own work and that no one helped you, and that *Ask* has permission to publish it in print and online.
6. For information on the Children's Online Privacy Protection Act, see the Privacy Policy page at cricketmedia.com.
7. Email a photo or scan of artwork to: ask@cricketmedia.com, or mail to:
   Ask, 1 East Erie Street, Suite 525,
   PMB4136, Chicago, IL 60611
   Entries must be postmarked or emailed by August 31, 2023.
8. We will publish the winning entries in an upcoming issue of *Ask*.

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Make Summer Sizzle
with Our Summer Events

JULY

14 FRI **Story Club for Kids: Solving Problems** KIDS

15 SAT **Kids' Mandarin Power Hour** KIDS

17-21 MON-FRI **Language Summer Camp** KIDS SPANISH - AGES 8-12 | MANDARIN - AGES 9+

21 FRI **Spanish Literacy Reading Night** KIDS

AUGUST

7-11 MON-FRI **Language Summer Camp** KIDS SPANISH - AGES 8-12 | MANDARIN - AGES 9+

18 FRI **Story Club for Kids: Managing My Fears** KIDS

18 FRI **SPIDER Story Workshop** KIDS

22 TUE **Spanish Literacy Reading Night** KIDS

REGISTRATION IS NOW OPEN

Visit **cricketmedia.com/community** to learn more and save your spot!

Story workshop?
I'm there!

READY FOR SOME REAL SPANISH FLAVOR?
¡SI! ¡SI!
MEWY!

Plush's

PERFECT PROJECTS

art by Amanda Shepherd

Cat and Dog Delights

**Do you have a furry friend around the house?
Liven up their lunch with these yummy treats—safe for both Fluffy and Fido!**

It's cookies for carnivores!
BAKE SALE

What you'll need:

2 cups wheat germ

3 small (2.5 ounce) jars of strained chicken baby food

1 tablespoon water

Baking sheet

What to do:

1. Ask an adult to preheat the oven to 350° F.
2. In a medium bowl, mix the wheat germ, baby food, and water together. Add more water if necessary to form a thick dough.
3. Roll dough into 1-inch balls, and place on a lightly greased cookie sheet or parchment paper.
4. Flatten the balls slightly with a fork dipped in water, or shape with a cookie cutter.
5. Have an adult put the cookie sheet in the oven for 20 to 25 minutes.
6. Cool before serving. Prepare for happy pet snuggles!

text and art by Thor Wickstrom

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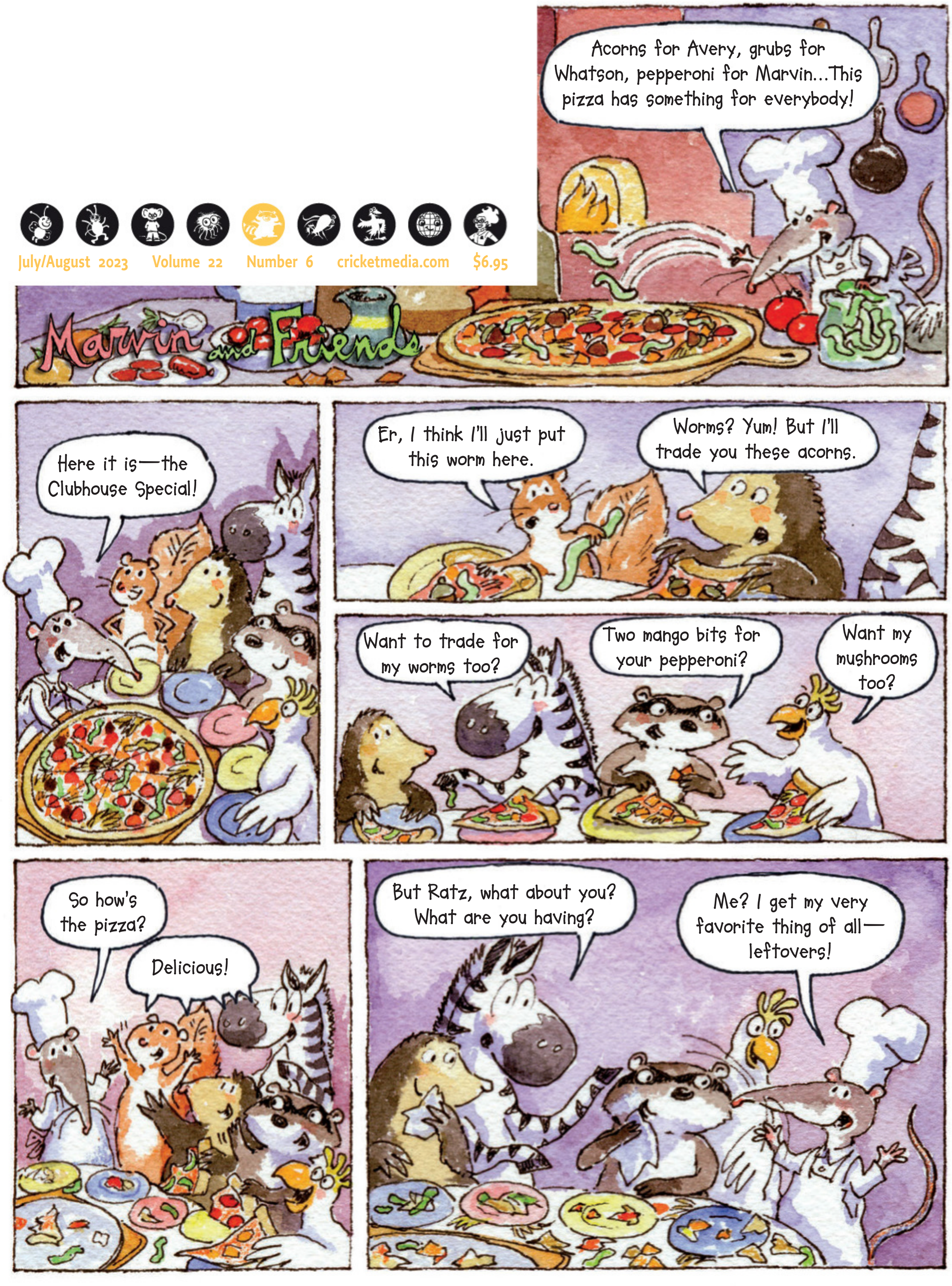
Marvin and Friends
Acorns for Avery, grubs for Whatson, pepperoni for Marvin...This pizza has something for everybody!
Here it is—the Clubhouse Special!
Er, I think I'll just put this worm here.
Worms? Yum! But I'll trade you these acorns.
Want to trade for my worms too?
Two mango bits for your pepperoni?
Want my mushrooms too?
So how's the pizza?
Delicious!
But Ratz, what about you? What are you having?
Me? I get my very favorite thing of all—leftovers!